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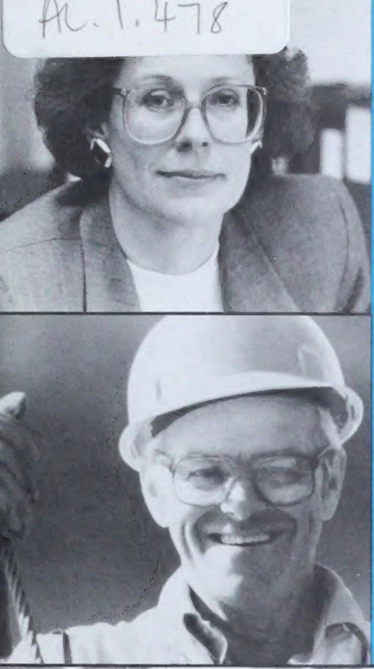

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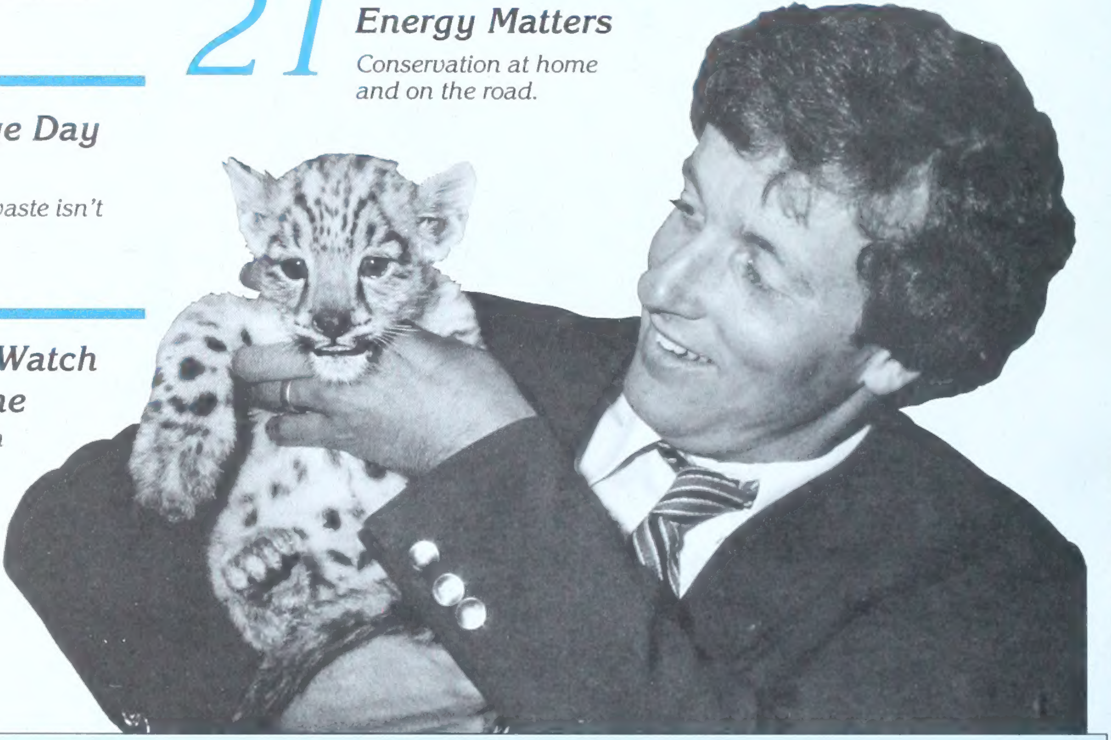

CALGARY ZOOLOGICAL SOCIETY

Environment Views is published quarterly by Alberta Environment. Each issue deals with a specific topic from various viewpoints with the aim of increasing awareness of environmental issues among Albertans. *Environment Views* is directed by an independent board with representation from environmental groups, government and industry. The views expressed by the publication are not necessarily those of Alberta Environment.

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Alberta
ENVIRONMENT

CANADIANA
JUN 19 1989

What You Can Do

Soon after editing the stories for this issue, and full of the new information I'd picked up, I found myself talking to a group of other mums at a picnic. Cloth diapers, blah, blah, reusable containers, blah, blah, separating garbage, blah, blah.We were all having a lovely time congratulating each other about how progressive we had become just lately, and trotting out examples from business and industry about how that sector was responding to the new push to preserve the environment, when one of the mums interrupted.

"Wait a minute," she said. "We were doing this recycling stuff when I lived in California in the 60s. So what's the big deal now?"

She's right. I have never put a newspaper in the garbage in my adult life, and it was in the late 60s when I learned to add washing soda to soap powder as a laundry detergent substitute.I was a bit stuck for an answer, but I think the difference may be a matter of scale. In the postwar years and even in the 60s, recycling and other conservation efforts seemed to be the preserve of the crunchy-granola, tree-hugging crowd, and to require an extraordinary commitment.

Now, it seems that conservation is an ethic being embraced by almost everyone, at the corporate as well as personal levels. It may be that it took a certain amount of farsightedness to relate to environmental threats, at least in western Canada, in the 60s and 70s. But a few years of weird weather, and more than a few disasters (Bhopal, Chernobyl, offshore oil spills and the like), have made it all seem much more real.

Somehow, rearranging your life a little to use less energy, and to create less of a burden on the landfill and the river, doesn't seem so much to ask any more. And somehow, it seems to keep the spectre of environmental disaster a bit at bay, to know that you are doing something. There's a Pete Seeger song that comes to mind, and it runs something like, "One man's hands can't break a prison down, but if two and two and fifty make a million we'll see that day come round."

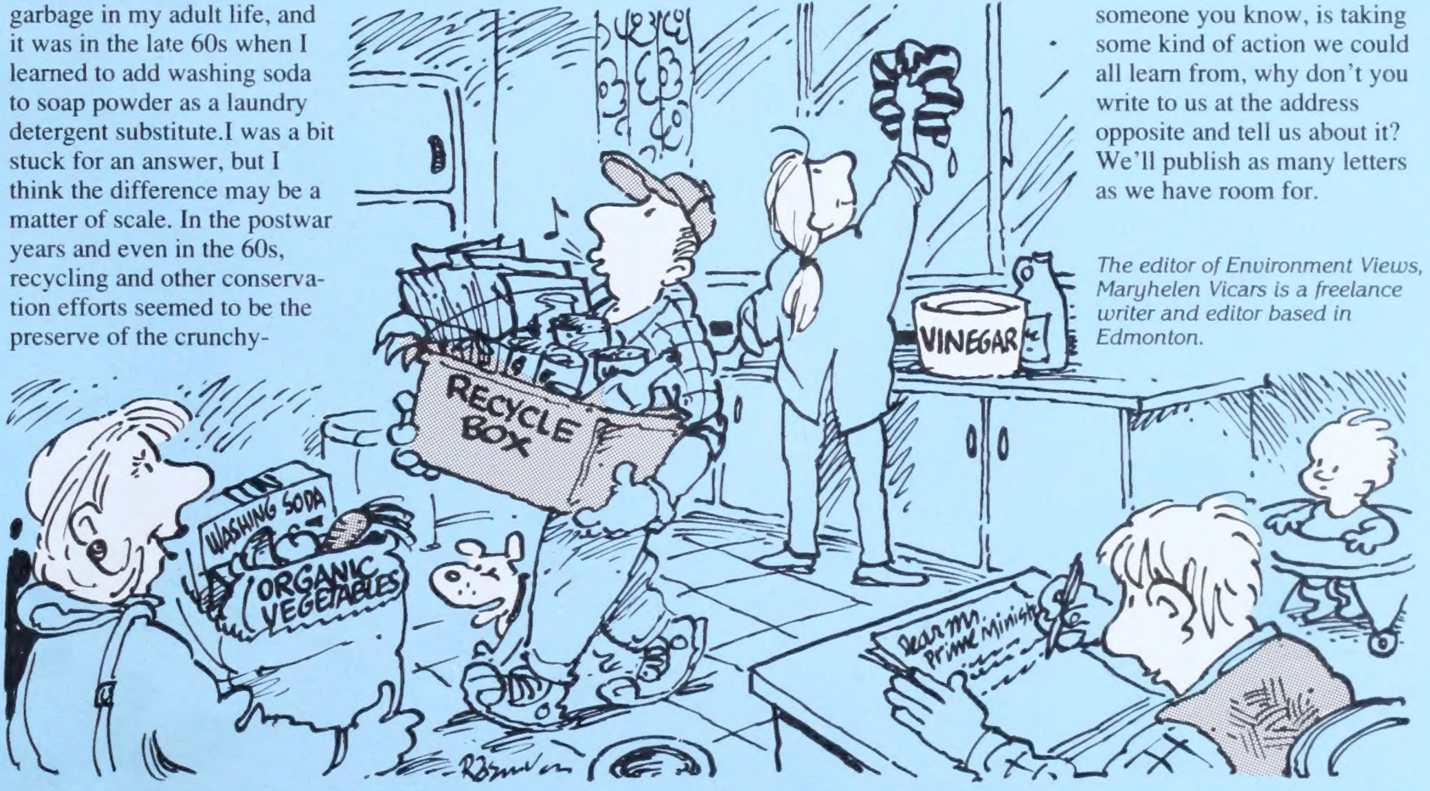
Of course as editorial board member Dave Dodge so aptly points out in his Viewpoint on page 25, personal action is more than just what we can do in our homes and where we work. We have to support industry and government when they are environmentally responsible and challenge them when they're not. For more on this kind of personal action, see our March issue, *The Environment is Everyone's Business*.

In this issue, we are doing things a little differently. In four stories we asked writers to take a first-person approach to waste management, household toxics, pure food and energy conservation. We wanted to know how these issues are reflected in ordinary attics, shopping carts, and kitchen cupboards.

But first, we thought we would ask a few individuals who are public environmentalists of one kind or another how they do in private. Eric Bailey found, for example, that Janis McLean-Hayden drags the neighborhood dumpster for clothes to wash and give to the Goodwill; Kim Sanderson joined her community league to help raise community consciousness about the environment; and Brian Keating uses pandamania to get people excited about wildlife habitat.

Personal action is a wonderful subject. If you, or someone you know, is taking some kind of action we could all learn from, why don't you write to us at the address opposite and tell us about it? We'll publish as many letters as we have room for.

The editor of Environment Views, Maryhelen Vicars is a freelance writer and editor based in Edmonton.



Prairie Conservation Plan

The Canadian prairie— in its natural state— is vanishing rapidly, leaving native plants and animals at risk as habitat disappears.

Almost all of the tall-grass prairie is gone, mostly to agriculture, some to urban expansion and industry. Only about 24 per cent of the mixed prairie land and 25 per cent of the aspen parkland remains in its native state.

Nine Canadian wildlife species, including the passenger pigeon, swift fox and black-footed ferret, and several subspecies including the plains wolf and the plains grizzly, no longer found on the prairies. Millions of plains bison once roamed, but today, only a few fenced herds remain.

Black-footed Ferret

WARREN CLARK

The piping plover and the peregrine falcon are two endangered birds, the ferruginous hawk is threatened, the small white lady's slipper is an endangered plant and the white-fringed orchid is rare.

The Prairie Conservation Action Plan intends to change that. World Wildlife Fund Canada, in co-operation with the Alberta government, recently released details.

The plan was drafted by a World Wildlife Fund steering committee of westerners representing various groups and conservation organizations from Alberta, Saskatchewan and Manitoba. The purpose of the plan is to prompt action by all parties to conserve the biological diversity found on the Canadian prairies.

A prairie conservation co-ordinating committee has been established and is expected to hold its inaugural meeting shortly, says Ian Dyson, regional resource co-ordinator of central and southern regions for Alberta Forestry, Lands and Wildlife.

More than 30 representatives from government, industry, agriculture and the academic community are included on the committee, Dyson says.

The plan calls for urgent action on several recommendations, including:

- Identifying remaining parkland and prairie
- Developing a system of protected lands and connecting corridors
- Preparing recovery plans for rare, threatened, vulnerable and endangered species
- Implementing habitat restoration and management plans
- Encouraging government to promote conservation of native prairie
- Encouraging balanced land use on private lands.

– Cathie Bartlett

A Better Summer Ahead for Farmers

Alberta farmers are feeling more optimistic than they have in a long time as they head into this growing season.

That's because water isn't as scarce a commodity as it has been the last four or five years. Water reserves in the soil generally were medium to high in early spring in the north western and central western parts of the province, thanks to fall precipitation and late winter snows.

Peter Dzikowski, agricultural weather resource specialist for Alberta Agriculture, says soil water reserves were a bit low in the Peace, but improved after late winter snows.

"The on-farm water supply (lagoons and dugouts) is fairly good," Dzikowski says. "It's better than it was last year."

The picture changes a little in the south, with soil water reserves in some southeastern areas only half of normal, says Dick Heywood, water management specialist in Alberta Agriculture's Lethbridge office.

These areas will require good rainfall levels during the season, Heywood says.

But soil water reserves are "pretty good" around Lethbridge, thanks to snowfall in March.

While the prospects for a good year in the south depend on rain in the weeks ahead, the on-farm water supply was looking good in the spring, with dugouts 65 per cent to 70 per cent full in most southern areas. Alberta Agriculture's farm pumping program was called upon to help fill dugouts in the Coronation area in particular.

The feeling is generally optimistic in the farming community, Heywood says, at least partly because prices are better.

As well, weather patterns appear to be more normal this year, with a few late winter snowstorms. There have been few high winds, and therefore, less wind erosion.

– Cathie Bartlett

Public Involvement in Pulp Mill Expansion

Procter and Gamble Cellulose Ltd. is looking for public involvement before beginning an environmental impact assessment of the proposed expansion to its Grande Prairie pulp operation.

"We believe the public should have involvement earlier on in the process," says public affairs manager Eric Jerrard.

Meetings are currently being held with interest groups such as chambers of commerce and environmental groups to explain Procter and Gamble's plans and hear their concerns.

Information centres will be set up during the summer in seven different points in Northern Alberta between Grande Prairie and Fort Chipewyan to explain what an environmental impact assessment is all about and how people can become involved, Jerrard said.

Public hearings are tentatively scheduled for October and November.

"We're different than other

Continued on page 27

Eric Bailey

LOOKING INTO GLASS HOUSES
Environmentalists In Action

The private commitment of some very public conservationists

All of us need to become more aware of the impact we have on the environment as a first step toward making changes. For most of us, a few basic changes in the way we live and work will be a big step toward improving the state of the world around us. But an environmentalist can't stop there.

Just as people with perfect pitch are tortured by a piano slightly out of tune, true environmentalists cringe at the harm their actions may do the environment and strive daily to lessen them. They preach environmentally sound practices to friends, employers and co-workers. They suffer angst over their lapses. They become environmental evangelists, railing against government policies, industry inaction and public apathy. Worst of all, they live in glass houses, surrounded by people ready to bring their errors to their attention.

In looking at the range of actions we can take to conserve our environment, we thought we should take a peek into a few of those glass houses to see how the pros translate their often high-profile commitment into personal action.

GOVERNMENT OF ALBERTA

Kim Sanderson

Kim Sanderson: Using a Few Well-chosen Words

Environmental action begins at home. An environmental professional like Kim does the same things at home anyone could. She and her husband installed a programmable thermostat, insulated their hot water tank and put up a clothesline in the yard. They rerouted their eavestroughs to collect water for the organic garden which Kim fertilizes with compost partly composed of grass clippings rounded up from heapless neighbors.

Kim has stopped using bleaches and toilet bowl cleaner and is a committed recycler, of course. However, she has begun to put a lot of effort into raising consciousness around the neighborhood.

"I got involved in my community league because I think they should have a stronger environmental focus," she says. "I took on the newsletter and I put an environment-related piece in every month."

She also likes to give civic leaders a pat on the back when they display some sensitivity to the environment. "I write letters when someone does a good job. I simply say, 'I like that, you did a good thing.' I'm trying to do more of that because it's a more positive, more valuable way to have an influence."

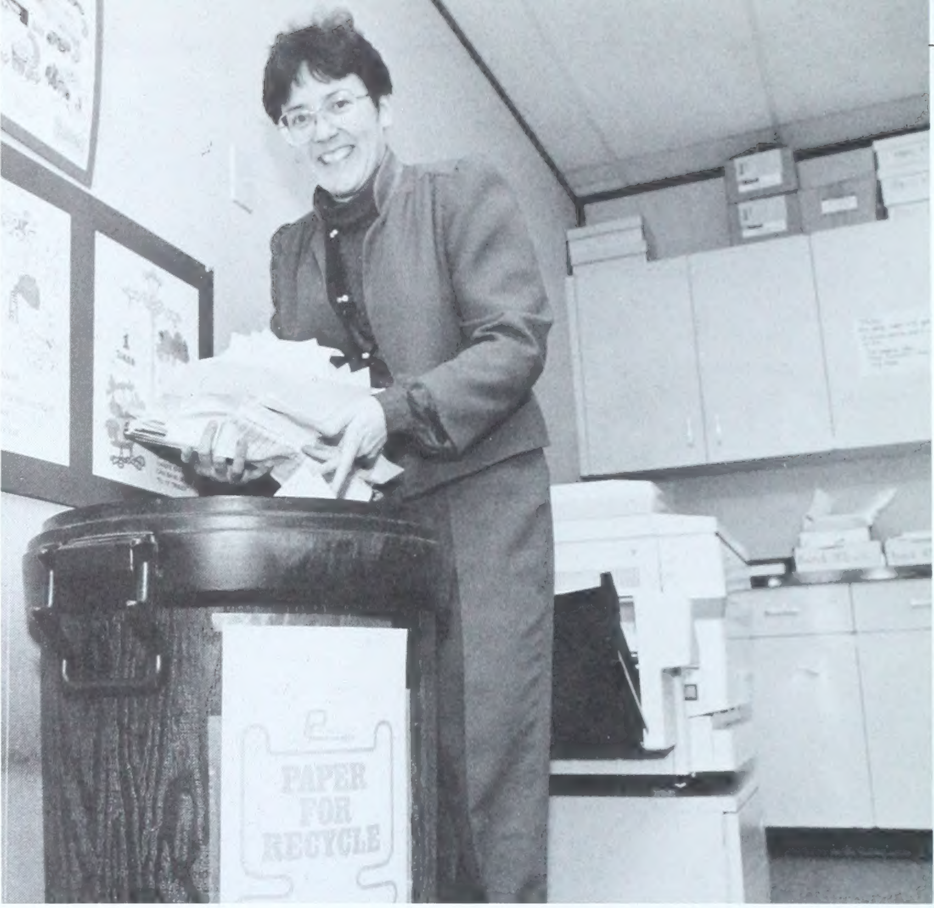
Kim walks to work, winter and summer, only occasionally riding the bus. While bus service to and from her office is good, Kim has some well-chosen words of complaint for the city of Edmonton which, she says, treats pedestrians as second-class citizens by not providing enough sidewalks and by mounding snow cleared from roads onto sidewalks. She also says getting around the city during the day on public transport is a slow and unpredictable way to do business.

At work, Kim and her co-workers at the Environment Council of Alberta, environmentalists all, do what they can in less-than-ideal conditions. "We maintain a just-in-time inventory of documents. We only photocopy our publications as needed, that way we get no waste and no overage."

They stopped using glossy paper for reports because it can't be recycled. They use the backs of waste paper for scratch pads before sending it to the recycler. They make a concerted effort to do as much copying on both sides of a piece of paper as possible which has reduced their paper and postage costs. They collect cans, bottles and other recyclable containers in their lunchroom where they have switched from Styrofoam to paper cups.

When the ECA automated their offices, they recycled their furniture by modifying it to suit the new computers. Computerizing has reduced their paper burden considerably; memos and files are now handled electronically. They even have their laser printer cartridges recharged rather than replacing them.

But the ECA falls short of total enlightenment. Employees can't turn off the lights when they leave their desks and they can't lower the heat on their floor when no one's at work.



GOVERNMENT OF ALBERTA

Kathryn Zimmerman

Kathryn Zimmerman: The Charge of the Light Brigade

The Energy Conservation Branch of Alberta Energy scores good grades in this area, though. Lights can be controlled in each room and employees have taken energetic measures to ensure electricity is conserved. Workers turn off their lights when they leave their offices. Lights in washrooms and meeting and photocopying rooms are off when no one's there – the branch installed motion detectors that turn off the lights when things stop moving.

"We formed a light brigade to go around and turn people's lights off for them. We'd leave them a message and fine them 25 cents each time they forgot. We eventually earned enough to buy a microwave for the staff room," said Kathryn Zimmerman, supervisor of school programs for the branch.

Kathryn says her office uses many of the same techniques the ECA has discovered but has developed a few wrinkles of its own. Memos and notices travel hand to hand among groups of staff rather than arriving one per desk. Urgent or timely information is posted on bulletin boards.

The branch thinks big, too, and they persuaded their landlord to participate in one of the branch's commercial energy audits. "We found $55,000 could be saved in one year by actions that would involve no investment by the building owners," Kathryn said. The actions consisted of such simple things as turning the heat down when no one is in the building and having the janitorial staff go around and turn off lights in unoccupied spaces.

While the branch can put its finger on energy and technology that can save money in offices, industrial sites and homes, Kathryn says her long-term concern is education. "All we have to do is build simple energy-saving habits. Individuals can be crusaders in their workplaces and it will catch on. Through education and other people's devotion, the message will get across."

Rick Mrazek: No Stewards on His Ship

In a small flotilla of canoes sweeping around a meander in the Oldman River, Rick finds himself trying to destroy the noble old concept of stewardship of nature in order to try to save Alberta's natural environment. He suggests to his students that the idea that man is a steward of natural resources implies (wrongly, he believes) that we have the right to do what we see fit with them.

Rick, an associate professor of outdoor education at the University of Lethbridge, says his environmentalism compels him to teach. "I look at students and what's right for them instead of looking for a solution that doesn't offend anyone.

"Kids strive to get through stages of development to a state where they can actually do something, then find out that the mass destiny they assumed was there isn't. But they do find wonderment in the environment and they respect it. They become wise consumers and at some point through their consumerism they direct the impacts we make on the environment."

Rick is a member of a strong network of environmental education specialists in schools, colleges and universities throughout the province. He continues to lobby for an environmental base for all elementary and high school curriculum as his professional interests shift more toward training other teachers. He has a year-old daughter and he says parenthood "has shown me my major emphasis has to be on younger children. My impact is quite direct because I deal with student teachers and I go right into their classrooms and help them work with kids to learn about the environment."

Brian Keating: Animal Magnetism

Teaching people who aren't in school about the environment calls for an uncontrollable compulsion to help people experience and understand nature. Brian Keating, education curator at the Calgary Zoo, has answered the call.

Brian manages learning programs ranging from information and regular activities for families and school groups to such special activites as the panda breakfast programs which attracted full houses of 100 people a day for the full 210 days the pandas were in Calgary last year.

Brian has a regular weekly spot as CBC Calgary's resident naturalist and crops up half a dozen times a year on national radio as well as at least once a month on commercial radio stations in the city. The animals, landscapes and environmental issues Brian talks about are changing constantly but the conservation ethic he works into each program at the zoo and on the air never wavers.

"I do the job out of a personal, absolute love of nature," he says. "My wife and I are passionate about enjoying natural landscapes and it gives me great joy to tell other people about it."

He talks about recycling, and about buying a house close enough to the zoo that he can cycle to work every day, summer and winter, but the subject of conversation snaps relentlessly back to conservation and interpretation.

"My livelihood depends on being able to continually attract people to programs which depend, in turn, on people's interest in conservation," he says. "We use the animals as an attention getter – as a way to get people in to talk about wildlife conservation. To get people excited about the environment, you have to hit their emotions, spark some imagination, spark some curiosity by being positive."

Stephen Herrero: Backcountry Soul on a Mountain Bike

A positive attitude and a sense of soul also permeates Stephen Herrero's classes at the University of Calgary. A professor of environmental science and biology, Stephen is widely known for his studies of bear behavior and his book Bear Attacks: Their Causes and How to Avoid Them.

"Being a professional in the environment has heightened my sensitivity and awareness of the environment and what's special about Alberta's environment – I draw tremendous inspiration and soul-building from it," Stephen says.

"I regard it as my spirituality, which is really a sense of awe and wonder. I want to share that with others so we'll have a better chance of sustaining a planet on which we can live."

On a personal basis, he recycles, uses recycled paper, avoids Styrofoam and tries to relieve pressure on rain forests by not buying such products as South American beef and tropical hardwoods. He gardens, makes a conscious effort to reduce the total amount of waste his household produces, and conserves water. And, he rides his mountain bike only in areas that can withstand the impact.

Dr. Stephen Herrero

CALGARY ZOOLOGICAL SOCIETY

Brian Keating

"I'm not always successful at minimizing the impact of my lifestyle," he admits. "I cringe every time I pick up a newspaper because of the pulp it represents but I don't know what to do about it - being an environmentalist is both a bane and a blessing."

Stephen is optimistic about the outlook for our planet, mainly because of greater individual awareness of environmental issues.

"The last 20 years of environmental education have begun to pay dividends. We're getting better and better students in my courses – better able to answer the questions posed by the concept of sustainable development," Stephen says. "Overall, it's very exciting to be in an era of new consciousness about the environment which must inevitably lead to improvements."

Janis McLean-Hayden: A Compulsive Earth-Lover

A positive, optimistic outlook about the future of the planet will certainly buoy you up as you cart the potato peelings out to the compost heap. Janis McLean-Hayden, perhaps the most committed environmentalist interviewed, feels pessimistic about the fate of natural environments but she keeps at it because she can't help herself. "I'm a compulsive earth-lover," she says.

A laboratory technologist at the University of Alberta hospital, Janis concentrates on bone marrow at work but devotes virtually every remaining waking hour to the environment.

She is a director of the Alberta Wilderness Association and represents the AWA on the renewable resources subcommittee of the ECA. She sits on the board of the Alberta chapter of the Canadian Parks and Wilderness Society and edits the chapter's newsletter. She is a member of the steering committee of the Alberta Environment Network.

As a very public environmentalist, Janis lobbies government and industry, works evenings and weekends on the cause, and brings converts into the fold. Whenever they can, she and her husband Grant slip away to the mountains to hike and cross-country ski or they escape in a canoe for a few days.

Needless to say, there's an organic garden and compost heap in their back yard. They catch rainwater off the garage roof for watering. Janis walks and Grant bicycles to work. They put bricks in their toilet tanks. They live in Strathcona in inner-city Edmonton so they walk to stores for most of their shopping. Grant, a mechanic, converted their truck to propane. And, predictably, they recycle. But these are the basics for any serious environmentalist. Janis and Grant tend to take things to the limit.

They were recycling long before the blue plastic collection boxes started sprouting all around Edmonton. They have reduced their total output of garbage to one brown paper grocery bag full a week.

"I buy most of my clothes at second-hand stores," Janis says. "Across the street from our house there's a moving and storage place and their dumpster is always full of incredible stuff - we've salvaged furniture and a stereo system and we even wash clothes we find there and take them to the Goodwill." Grant drags abandoned bicycles out of the North Saskatchewan River with the canoe and uses them for parts - he built Janis a mountain bike out of river salvage last summer.

They've completely weatherstripped their Second-World-War-vintage home and built a huge insulating shutter for the picture window in the front room. Grant built a wood stove for the basement in which they burn discarded wooden shipping material salvaged from the railways. Janis says they now need to run their furnace only when the temperature outside drops to -40 degrees Celsius.

GOVERNMENT OF ALBERTA

Janis McLean-Hayden

"I cook a lot of stuff from scratch and buy foods in bulk - it reduces packaging and I like to know what's in the food," Janis says. How they eat is decided on health, environmental and moral grounds. For the last couple of years, Janis and Grant haven't eaten red meat. "The government builds dams to irrigate alflalfa to feed beef and yet beef and pork are poor converters of plant protein compared to poultry." They're also uncomfortable with the way animals are treated in slaughterhouses. They eat only farm chickens and eggs because of their abhorrence of the conditions in battery poultry operations. This approach to their diet has built a thick collection of vegetarian recipes in the McLean-Hayden household.

Janis laughs at the suggestion that her way of life may seem extreme to the average Albertan, even to some who consider themselves friends of the environment. "Sometimes I like to tell people what I do just to shock them and get them thinking about what they do themselves," she says. "We have pretty good neighbors - they've never said they think we're crazy. And the people we hang around with have a similar lifestyle."

People committed to the environment and to taking significant personal action to conserve nature do tend to congregate. This may be effective for the purposes of lobbying and propping up your resolve during times of temptation, but those of us who aren't full-blown environmentalists could use a few role models in our midst. As Stephen Herrero said, if we see problems, we may not know what to do about them.

So, when in doubt, ask an environmentalist. You'll find them in your neighborhood, at work, at school, at the zoo or a park. If you'd like to corner a lot of them in one spot, call the Environment Council of Alberta in Edmonton at 427-5792. They'll put you in touch with someone who has good ideas.

Eric Bailey is a freelance writer specializing in outdoor and interpretive writing, working from Lacombe.

Hazel Sangster

CUTTING BACK

On Garbage Day

Being responsible about waste isn't that hard, Hazel finds

GOVERNMENT OF ALBERTA

Writer Hazel Sangster found her family generated a surprising amount of waste

I had read all the statistics. I knew that each Albertan generates about 766 kilograms of municipal solid waste per year for a provincial total of 1.8 million tonnes. I knew that we city-dwellers generate far more waste than our country cousins. And I knew that the bill for getting rid of our collective garbage came to a whopping $86 million in 1984.

But it never hit home that it might be a personal problem until I started cataloguing everything I threw out of the house for a period of two weeks in preparation for this article. (The City of Edmonton is currently putting together a household waste audit package with which householders can catalogue their waste and compare it with a national average.) We are probably a fairly typical city family - engineer dad, freelance writer mum, three kids, one dog, one cat, one hamster. We posted a list in the kitchen and everyone wrote down what they tossed. This was a real eye opener!

> *...each Albertan generates about 766 kilograms of municipal solid waste per year for a provincial total of 1.8 million tonnes.*

Some for the Dog, Some for the River

I secretly thought that I was fairly conscientious about our family's waste generation. We have a canine garburator and an electrical one and therefore do not throw vegetable peelings, food scraps, tea leaves, coffee grounds, and the like into the garbage. But as Francis Hugo, manager of the waste management branch of the City of Edmonton's Environmental Services, told me, "A garburator is just a consumer convenience. You're just changing solid waste for liquid sewage. You're still left with residue sludge."

Hugo recommended composting. My parents have always had a compost heap and it is something that I had considered, but never very seriously. What happens in the winter? Do you keep throwing stuff onto the pile? And then in spring is the air is filled with the smell of six months of leftovers?

Tom Rogers, section head for resource recovery and recycling of the Waste Management Branch of Alberta Environment admitted that Alberta's climate does pose a challenge to composting. "But organic material does generate its own heat while composting. So the success of composting does depend on the level of activity in the heap."

Hugo is currently developing guidelines and instructions for homeowners so they can set up their own composting units. He hopes to develop a small unit that homeowners could buy at a subsidized price. All food wastes, such as vegetable peelings, leftovers, coffee grounds, tea bags, even small chicken bones, could go into a composter, even the cleanings from my son's hamster cage. Dog droppings and certain kinds of kitty litter can also be handled safely in the compost pile.

Obviously a small home composting unit would not handle the two garbage bags per week of grass cuttings from our yard in the summer months. The City of Edmonton has recently acquired a composting facility with a capacity of 200 metric tonnes per day. This facility separates organic material from mixed waste. One of the problems is the acceptability of the compost, which may contain residue chemicals from pesticides and insecticides. However, Hugo is confident that there is a market for the compost in non-food production operations (golf courses, sod/tree farms, landscaping, potting soil.)

I was not surprised to find that the bulk of our garbage was paper. National statistics indicate that paper makes up 36.4 per cent of municipal solid waste. Disposing of newspapers in the City of Edmonton's blue box does cut down considerably on paper disposal.

"The average household generates a pile of newspaper 10 feet high in one year. Take Edmonton's 125,000 single family houses and 45,000 apartments, and Edmonton would generate a pile of newspapers 322 miles high!" says Hugo.

What Your Blue Box Can Do

What I didn't realize, however, is that the blue box accepts any paper that isn't glossy. So all my office waste, all those notes that come home (in triplicate, as I have three kids in one school), all those newsprint junk mail flyers - all paper other than glossy magazine-type paper and "contaminated" paper (envelopes with plastic windows, for example) can now go out with the blue box.

Various paper recyclers will buy paper from homewowners as well as from industry and offices. (The following are firms operating in Edmonton. For paper recyclers in your area, check the yellow pages.)

Paperboard Industries Corporation will buy all grades of paper and cardboard although they prefer high-grade paper.

GOVERNMENT OF ALBERTA

"Customers get a better price for sorted paper. The best thing is to come out and we'll instruct you on how to sort the different grades of paper," says manager Russ Malanchuk.

Paperboard Industries has its own pulp mills and national and international markets. "The key to recycling is the market, then the collection," says Malanchuk.

Paper Chase, a private non-profit group, picks up paper from large and small offices for recycling. They collect from all government and many private offices, and plans are underway for them to begin accepting glossy paper later this year.

Alvin Ballachay, manager of Allied Paper Savers, says they buy all grades of paper, but it has to be sorted.

Another big component of our family's garbage is milk cartons - we go through eight 2-litre containers of milk a week. These containers are made of waxed cardboard, and as yet are not recyclable. On a personal level they are reusable for storing homemade chicken stock or juice, for children's art projects, cut off for pots for starting seedlings for the garden. The milk industry is investigating other containers, but it could be some time before a consensus is reached that will satisfy both industry finances and consumer demands. One B.C. dairy that has never made the switch away from glass milk bottles is finding itself with a lively increase in business, from those concerned about chemicals in the paperboard carton as well as waste management.

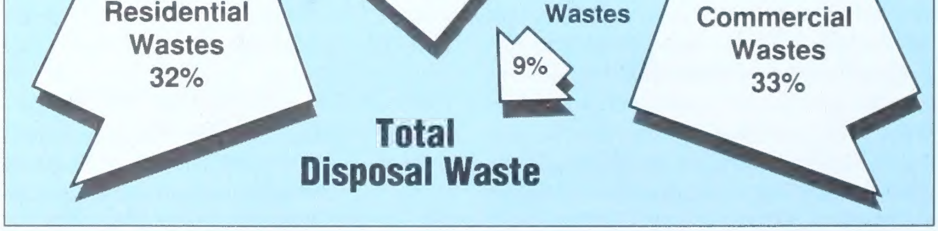
Issues in Plastic

And then we get to the plastics. Oh dear! Until recently I had thought that plastic was plastic - not so. There are many hundreds of different kinds and grades of plastics, some recyclable, some not. Plastic bottles are a valuable material and are readily recycled through the bottle depots, and may now be collected in the blue box.

Some stores will still bag groceries in paper bags, and some stores will bag your groceries in your own plastic bags if you bring them with you. I have stopped putting produce in plastic bags unless it is absolutely necessary. Bananas, a couple of green peppers, or a head of lettuce can just sit in your shopping cart, or in a small basket in the cart. After all, that's the way it used to be done. The technology for recycling plastic film is in place and the City of Edmonton plans to include it in its collection later this year.

The problem with plastic has been compounded, says Hugo, by the plastics industry going in two directions at the same time. The plastics industry recognizes that the disposal of their product is tied in with the success of their industry. But they have not yet agreed on which route to take: the development of biodegradable or photodegradable plastic, or the development of a comprehensive plastic recycling program. Both Francis Hugo and Tom Rogers agree that recycling is the best route.

"Degradable only means getting rid of



GOVERNMENT OF ALBERTA

Hazel Sangster and Tom Rogers

the physical evidence," says Hugo. "The chemicals still leach down into the soil and rivers."

Our family also generates a lot of solid plastic waste - yogurt, margarine containers, solid plastic from bakery products, and plastic bottles from everything from bleach to shampoo. Your local kindergarten or playschool always needs containers for paint, and egg cartons and toilet rolls for art projects. In the home I use most of my plastic containers in one way or another.

The Imagination Market in Edmonton is a unique recycling group. They collect and recycle by-products, overruns, off-cuts, and discards from local industries for use as art materials. Their materials are available through their retail store, workshop or by mail order. The day I visited, two teachers from were browsing in the bins of material and a kindergarten class were making futuristic belts and headwear out of the Imagination Market's unique garbage. If you have special waste of your own, (fancy fabric, film, or one-of-a-kind packaging material, for example), they may have a use for it.

As yet, polystyrene is non-degradable and non-recyclable. This includes the trays that meat and baked goods come on, fast food containers, some egg cartons. I try to buy as little polystyrene as possible. The trays are reusable for art projects, for cookie plates, storing leftovers, but usually the supply exceeds your need. There is a rumour that companies such as McDonald's are planning to move to containers made from paper fibre, but I was not able to confirm this. McDonald's did announce last year that its foam containers were now made by a process that does not release CFCs (implicated in the thinning of the ozone layer).

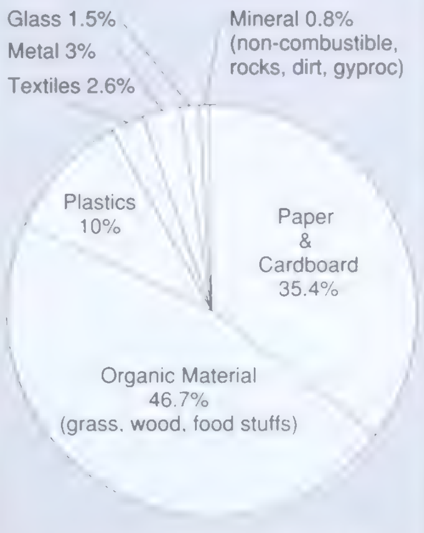
Applied Polymer Products Inc. is the biggest plastic recycler in Alberta. "Last year we recycled 40 million plastic pop bottles," said manager Ernie Kirkwood. Applied Polymer is currently researching the possibility of recycling other plastics, for example oil and pesticide containers. "The problem with household plastics," says Kirkwood, "is that they're usually a combination of plastics that are incompatible."

Almost Everything is Recyclable

Tom Rogers says that almost everything is recylable. "One of the problems is contamination. In mixed packaging, one material is a contaminant to the other."

One of the worst examples is the box juice container, made of plasticized cardboard with an alumunium seal. These cannot be recycled. I used to buy a lot of these - the small kind for lunch boxes. Another "contaminated" product is the juice can that is cardboard in the middle with aluminium ends. The aluminium ends can go into the blue box, but have you tried prying them apart? It is usually the more expensive frozen juices that come in all-metal containers. Yogurt cartons with lids are preferable to those with foil seals.

What's In Edmonton's Landfill



From: "Edmonton-Strathforth Regional Solid Waste Management Phase 2 Report–Sanitary Landfill and Waste Treatment: An Integration Strategy", Stanley Engineering, Feb. 1988.

The federal government is bringing in "environmentally friendly" labelling. These labels of three white doves intertwined around a maple leaf will indicate that the product (including the reusable or recyclable packaging) has been approved as environmentally acceptable by the Canadian Standards Association. These labels should be appearing on shelves very soon. Lloyd Egan, co-ordinator of the recycling program with the City of Edmonton's environmental services department, recently spent some time at Canada's first national exhibition and symposium on recycling and the environment, "Waste not, Want not," at which packaging was a major topic of discussion.

This conference brought together all levels of government, the producing and packaging industries and private citizens.

"The City of Edmonton's recycling program was recognized as the second largest in North America. Symposium conclusions echoed Edmonton's findings that the economics of recycling and the collection of material are crucial to the success of the program," reported Egan.

During my two-week cataloguing period our old dryer broke down, and our repairman declared it a goner. So we had to buy a new one. I had hoped that the people who brought the new one would take the old one away, but that was not to be. So we hauled it out to the garage, and I asked Francis Hugo what I should do with it.

"Based on an average of four appliances per household, and a lifespan of 15 years per appliance, the City of Edmonton discards approximately 45,300 appliances a year."

Until recently Stelco would accept them and melt them down. But last summer the U.S. Environmental Agency declared that this metal was contaminated by enamel, insulating material, or PCBs from capacitors, and they notified steel plants that if any contaminants were found in their steel they would be required to clean it up. As a result the steel companies no longer take old appliances and the City of Edmonton is forced to stockpile them at the landfill. Research is currently underway to strip the contaminants out of the appliances before recycling the metal, but once again economics plays a key role.

I plan to turn to the wanted-dead-or-aliveappliances ads, hoping that someone can rebuild it or at least use it for parts and scrap metal.

We also decorated my daughter's room and installed her birthday present of a new bed and desk from Ikea. The unassembled bed and desk came in cardboard, and I reluctantly put this out in the back lane with the garbage. I have since discovered that Shred-a-Can Recyclers Ltd. pays 1.5 cents a pound for cardboard. The City of Edmonton plans to introduce collection of cardboard for recycling later this year, which will include both large and small, as in the two or three cereal boxes I discard a week.

Toxic products like solvents and pesticides should be stored carefully until it's time for a toxics round-up (see page 27).

Alberta Special Waste Management Corporation

Statistics show that more waste is generated in urban communities than in rural ones, and that more waste is generated in economic boom times than in a recession. Relating this to a personal level, I find that our family generates more waste when we (or more realistically, I) am busiest. The tendency in any freelance business is to accept all jobs offered, just in case that a few months down the road nothing will be on the books, rather like my son's hamster cramming its cheeks with food knowing that he may be forgotten for the next few days.

Being busy means less time and more money. Less time to cook, less time to sort garbage before chucking it into one universal bag, more money to buy fast foods and store-bought baked goods. In this house it means pizza boxes, fast-food packaging, juice boxes thrown into lunch bags, the office garbage can emptied into the bag with the rest of the garbage. Obviously being a conscientious manager of one's own waste takes time and planning.

The blue box is now an integral part of our household. For the first few months we used it, it sat by the back door and everyone tripped over it. I have now cleared a space in the bottom of a cupboard. If we ever get around to upgrading our kitchen I will plan space for it, just as I would for garbage under the sink.

Sadly, not enough time seems to be a fact of modern life. The North American consumer has become used to unwrapping the packaging and tossing it all into one garbage bag and hauling it out to the back lane and forgetting about it. We can no longer do this. It is still our garbage and still our responsibility.

I found, however, that planning for handling the family's garbage properly took more time than actually doing it. Once I had placed a bag under the sink for cans and bottles, and an extra carton in the office for recyclable paper, the job was half done.

The “Waste not, Want not” conference seems to be on the right track. Waste management is a co-operative venture. Government, industry and the private individual have to work together. Recycling paper, glass and metal in the blue box is easy. Over the long term, there are markets for the recycled materials, and the collection is simple for the householder and the recycler. I look forward to the City of Edmonton's expansion of the blue box program.

As Hugo said, we have to remember waste is a case of basic physics and chemistry. “Matter cannot be created or destroyed. It can change its form, but it's always there. Waste management has to be a continuous equation where the basic elements are balanced.”

Hazel Sangster is a freelance writer based in Edmonton.

A You-Can-Do-It checklist

✓ Recycle all paper through the blue box.

✓ Start putting out plastic film, cardboard and glossy paper in the blue box system this year.

✓ Cut down on the purchase of non-reusable and non-recyclable materials. For example, use thermoses and lunchboxes, buy all-aluminum cans, minimize purchase of polystyrene.

✓ Cut down on purchase of packaging materials – buy baked goods in paper bags, not plastic containers, buy bulk foods to store in our own containers, limit fast food packaging.

✓ Separate mixed packaging as much as possible – take aluminum teeth off foil or plastic wrapping box, wash plastic film - separate, cardboard/aluminum juice containers. Recycle as much as possible.

✓ Look for re-uses of as many items as possible locally - e.g. home projects, playschool art projects, community projects, (Goodwill, Salvation Army and other thrift stores will accept clothing, dishes, ornaments and shoes in any condition - clothes unfit for use are made into wiping cloths)

✓ Recycle bulk cardboard, paper and plastics where possible through local recyclers.

✓ Buy products in “environmentally friendly” packaging.

✓ Start composting

✓ Be an active lobbyist for recycling standards for the plastics industry.

Shirley Serviss

TOXICS WATCH

Household Hazards Revealed

Villains in the cupboards; hazards in the shed

Shirley Serviss (left) invited toxic products expert Caroline Simons to give her home a checkup

GOVERNMENT OF ALBERTA

Tuesday, March 21: The Pitch

Maryhelen calls to see if I will write an article on toxics in my home; it will be "a voyage of discovery," she says. All I have to do is allow two experts to inspect my home for toxics and write about what I learn and what I plan to do as a result. "It should be fun," she says.

Tuesday, March 28: The Experts

I arrange to meet Jennifer Lowen, a home economist volunteering for the Environmental Resource Centre in Consumer Education and Information. The Alberta Special Waste Management Corporation will send Caroline Simons, an environmental manager for the corporation, at the same time.

> *All I have to do is allow two experts to inspect my home for toxics and write about what I learn.*

Thursday, March 30: Ready to Begin

A newly single friend comes over for supper. As we drink our coffee in the living room I tell him I am subjecting my home to a toxics survey the next day. Bruce says he saw a program on toxic products recently that came down particularly hard on a spray tub cleaner. He was delighted to know that

GOVERNMENT OF ALBERTA

Jennifer Lowen

such a product existed and promptly rushed out to buy some, as he had been trying to figure out how to get rid of the ring around his tub. "I'm afraid the program didn't have quite the desired effect on me," he says.

"I clean the shower stall by stripping and taking a scrub brush in with me," my husband volunteers. We agree that this method wouldn't work well in the tub if you were using a cleaning agent that was toxic.

Friday, March 3: Toxics Tour

After I meet Jennifer at the bus stop, she talks about how people have been socialized to use cosmetics, disposable products and various types of household cleaners.

"We have to start educating people to consider what resources are being used up, what sort of production methods are involved, what sort of packaging is being used, how it is being produced and transported, how we will dispose of the container or unused product."

Jennifer believes that if we get at people's reasonableness, we can persuade a lot of people to change. She cites as success stories the issues of smoking, drinking and driving, and the use of seat belts. However, she suggests that people attempt to change their lifestyle very gradually. Each week she changes something she does.

"As I finish a product, I start making my own," she says.

She saves the containers, where appropriate, to store her homemade replacements. There are some things, such as cosmetics, that are impractical to make yourself. Without preservatives, they don't keep long. She suggests looking for ready-made alternate products that use natural ingredients.

"If you make radical changes, it might be too difficult and you might get discouraged and give it all up," she cautions. "There is an old Buddhist saying, 'The thousand mile walk begins with the first step'."

Kitchen Hazards

We start our tour in the kitchen. Our cleaning products are stored in the cupboard under the sink which has child-proof catches on the doors (that most of my adult friends still haven't figured out how to open). Jennifer hauls them out one at a time: the Windex ("save the bottle and make your own with vinegar and water"); the Comet ("rub the area with borax"); the Lysol bathroom cleaner ("use a mixture of baking soda or borax and water"); the Drano — Jennifer spins her handy Household Hazardous Waste Wheel. "Flush your drains periodically with boiling water, baking soda and vinegar or use a plunger."

Our Cascade dishwasher detergent is acceptable, as it is the least caustic choice. No real alternative has been found. "Just use as little as possible," Jennifer cautions.

We dig deeper. She scowls at the Lemon Pledge. "Don't even use this up," she commands, and launches into a discussion on the dangers of aerosols and the wastefulness of products like this. The container is wasteful because it is made up of both metal and plastic and can't be recycled (also dangerous if it gets punctured). It is wasteful in terms of resources, and sprays have a tendency to give you more than you need. She bans the cedar oil polish as well. "Did you know it is a central nervous system stimulant?" I didn't. "You can use one part lemon juice to two parts olive oil or vegetable oil," she tells me.

The SOS pads come in for scrutiny next. "You can soak pots in washing soda and water, or sometimes boiling a mixture of baking soda and vinegar in the pan will help."

Wait a minute, what's the difference between baking soda and washing soda? Although they do some of the same things, baking soda is sodium bicarbonate and is edible whereas washing soda is sodium carbonate and is much stronger. Washing soda can be found in the soap and detergent aisle of most grocery stores. It can be used to clean and cut grease on barbeque grills, broiler pans, concrete, drains, fireplaces, floors, ovens and walls, Jennifer recites. It also removes stains and softens water.

The aerosol spot cleaners and spot removers (I swear must have been left behind by my husband's previous wife) come in for the same treatment as the Pledge. "Take them to the toxics round-up."

In general, it's best to use up most toxic products. If you can't use them up, give them to a friend or neighbor to use. If you want to throw something like paint away, put it in a safe place in the air to let it evaporate and dry and then take the can to the toxics round-up, she suggests. Kitty litter can also be used to absorb a liquid waste which can then be disposed of in a sealed container.

It's time to reveal the contents of the rest of the kitchen cupboards.

Baking soda, corn starch, vinegar, salt, vegetable oil are all useful cleaning agents. Jennifer spots them on our lazy susan and approves. She doesn't like the single-portion containers of applesauce (bought in a weak moment for school lunches) because of the excess packaging. It would be better to buy one large can and put smaller portions in reusable containers. I know that; I just get lazy sometimes. She suggests saving, washing and reusing bread bags rather than using Baggies as I do now. I know; I know.

> *Start small.*
> *"The thousand mile*
> *walk begins with*
> *the first step".*

Jennifer saves her Safeway bags and takes them back when she goes for groceries. I save mine and use them as garbage bags for the disposable diapers. "Disposable diapers?" Oops, I should have kept that one in the bag.

By this time Caroline Simons has joined us. "Did you know that if all the disposable diapers thrown out in the United States in one year were stretched end to end, you could get to the moon and back seven times over?" she asks.

I am unrepentant. I know disposable diapers don't degrade easily. I know they contaminate landfill sites. I know it is cheaper to wash your own or use a diaper service.

I confess to putting convenience over environmental issues. If I were starting out again, I would look more seriously at a diaper service, but I am almost through with diapers; my two-year-old will be trained soon.

Back to Beauty Basics

Our bathroom fares little better than the kitchen, although my aloe hair gel and vitamin E ointment (neither of which have been tested on animals) rate modest approval. You should look for non-toxic beauty products, or stick to basics such as mild shampoo, pure soap, Nivea Cream, petroleum jelly and Intensive Care body lotion.

It may be hard to identify non-toxic beauty products, but Jennifer tells me The Body Shop uses natural ingredients in its products, doesn't overpackage, doesn't use animals for testing, uses biodegradable bags and will refill or recycle its containers if you return them. Beauty Without Cruelty also puts out a line of cosmetics which have not been tested on animals. These may be available in health food stores or could be requested at cosmetic counters.

Jennifer prefers the natural look and has simplified her life to the point where she is down to using only a shampoo — no perms, no dyes, no conditioner. Dandruff shampoos can irritate the skin. Perfumes or coloring in shampoo and cosmetics may also cause irritation.

Our liquid soap is in an "offensive" (albeit attractive) plastic bottle which will take up a lot of room in landfill sites and won't decompose once it is covered. The roll-on deodorant rates Caroline's approval because it is unscented and non-aerosol, but Jennifer still turns up her nose.

"We are socialized to think we need deodorant," she says. However, she does reassure me that contrary to rumor, you can't get Alzheimer's from using antiperspirant with aluminum in it.

"The most hazardous items in bathrooms are usually the cleaning products," Caroline points out.

Our meagre supply of medications is dismissed with the caution that you shouldn't keep over-the-counter drugs for a long time — most have an expiry date right on the package. They should be disposed of during a drug round-up or sometimes a doctor or pharmacist will take them back.

Q-tips are frowned upon as they are not reusable but Jennifer does provide some allowance for health considerations (which includes using tissues instead of handkerchiefs). Caroline suggests buying swabs with cardboard or wooden sticks rather than plastic. The same is true for tampons — cardboard applicators or no applicators are preferable.

Our mint-flavored dental floss can be replaced by an ordinary spool of cotton thread and we can brush our teeth with baking soda. Caroline does.

We get a star for our large jar of Vaseline. It is multi-purpose and large containers are less wasteful than small containers, unless it is a product you're unlikely to use up in a reasonably short time — in which case you should buy only as much as you need.

The aerosol static guard (long forgotten under the sink) gets the expected reaction. "Whenever a container has a 'danger' sign on it, think twice about buying it," Caroline suggests. "It tells you something about what it will do to the environment."They suggest that static cling can be controlled by wearing clothes made of natural fibres rather than synthetics. I protest that cotton needs ironing and we decide crinkle cotton will have to become the acceptable standard. Static can also be controlled by removing clothes from the dryer before they are completely dry.

Washday Blues

This brings us to the laundry room. We wash only full loads and always use less detergent than the box suggests. The inspectors give us points for this, although we could be using pure soap flakes, with washing soda or borax. They advise dissolving the soap powder with hot water before putting it in the washer, as warm or cold wash settings won't dissolve it. Adding vinegar to the rinse cycle eliminates the need for a fabric softener. "Never use sheet fabric softeners in the dryer. They leave a film on the drum," they caution. I knew this and don't.

The spray-on stain remover gets us another black mark. "You can use natural spot removal methods depending on what has caused the stain." I have found the heavy-duty stuff is not that essential anyway, and have often managed to prevent stains by acting quickly after a spill, flooding the spot with a lot of cold water (for blood, milk, other proteins) or hot water (cherry juice, soft drinks). Grubby collars or the knees of overalls can be pretreated before going into the washer by rubbing them with a little laundry bar soap or detergent.

The bottle of bleach can be replaced with borax which is less damaging to fabric, but first we should use it up. When the bottle is empty, we should rinse it out and use the rinse water for one last bleach. This will remove the chemicals before I dispose of the container.

"You can't do this with paints or pesticides," Caroline notes. Toxics round-ups collect "empty" containers as well as partially full ones because they still contain chemicals.

The basement has the usual range of leftover paint (mostly latex), varnish, exterior woodfinish, paint thinner, oil stain, several tubes of panel and drywall adhesive, multi-purpose grease, concrete patch and insect killer. Oil-based paint is more toxic than latex paint because oils don't degrade as quickly as a water-based product. Latex paint also dries faster and gives off fewer fumes. Using oil-based paint means using solvents as well to clean brushes, so you are adding insult to injury. Caroline suggests

ENVIRONMENT ALBERTA

Caroline Simons

GOVERNMENT OF ALBERTA

If you're in Edmonton, try the Earth Care store at the Environmental Resource Centre (director Brian Staszenski, above) as a source of environmentally friendly alternatives to toxic products.

saving used solvent in a properly-marked container, straining it and reusing it as many times as possible. Latex paint also dries faster and doesn't give off as many fumes.

"It's best to use a brush rather than a sprayer because you don't waste as much paint and it doesn't put it into the air to be inhaled," Jennifer suggests. Rollers waste more than brushes, but none of us can imagine painting a whole room with a brush.

Killing More than Pests

The aerosol pesticide I bought years ago for spider mites on my Schefflera is banned because of the CFCs (one of the chief culprits in the thinning of the ozone layer), the unrecyclable container and the fact that "when anything is used to kill something, it's obviously harmful. It may kill more than one thing," Jennifer points out. She advises using soap and water for diseased houseplants or throwing them out. She believes it is also best to let nature take its course in the garden or to group vegetables for natural bug control using marigolds, onions, garlic, basil and thyme instead of pesticides.

The can of OFF insect repellent is decreed both unhealthy and unnecessary. Insects aren't as attracted to you if you don't wear deodorants or cosmetics, Jennifer says. Vinegar or a paste of baking soda and water can be dabbed on the bites to stop the itching and swelling.

If you'd rather not test your insect appeal, there are a number of products on the market containing oil of citronella or oil of eucalyptus that are quite effective. These can be found in health food stores or in some pharmacies.

We go back upstairs, past the chipboard bookcases in my den masquerading as oak. I am reassured that the formaldehyde vapors given off when such things are new have probably dissipated by now. "With something like that, I advise continuing to use it if you can," Jennifer says. Caroline agrees. The same holds for the carpets. The toxicity of the synthetic fibres has probably also dissipated by now. To clean carpets, sprinkle it with corn starch and vacuum, I'm told. Never use chemicals.

Oops. That probably means I should cancel the furniture cleaning I ordered for next week. I have difficulty imagining rubbing cornstarch into the two off-white (very off-white at the moment) loveseats in the living room, though. Maybe I could dye them with used coffee grounds instead.

No More Whiter-than-White

I offer to make coffee for Jennifer and Caroline, but neither takes me up on it. My disposable coffee filters are frowned upon, composed as they are of paper made sparkling white with dioxins, which may leach into the coffee.

"As a society we should give up bleached products and rethink our idea of purity," Jennifer suggests. The paper towel holder in the corner also gets the cold shoulder. I should be using dish cloths and floor cloths. "We have to get away from using things once and think about what we did before," Jennifer says.

I remember all too clearly what we did before. I grew up in a family of seven who all bathed in less water than I now use to rinse pasta. The toilet got flushed once a day. My mother churned butter, baked her own bread, grew a huge garden and spent all summer and fall canning and freezing and making jam. We washed plastic bags and hung them out on the clothesline to dry. We never threw anything away.

I'm now married to a man who throws out the piece of Saran Wrap you had planned to put back on the cheese, the second you set it on the counter. I have moved often enough that I have an aversion to any clutter in my life, and long ago stopped saving egg cartons and yogurt containers, although I do save cardboard boxes. In fact, we are about to move again — which will be a perfect opportunity to set things aside for the toxics round-up. The movers won't transport cleaning supplies or paints anyway.

Jennifer, Caroline and I talk about how we can't expect women to go back to spending all their time preparing things from scratch. There is something to be said for convenience (quite a lot, in my opinion). We talk about the need for us to relax our advertising-induced standards of "whiter than white", "cleaner-than-clean". I'm not sure that will be a problem for me — my standards are already fairly relaxed. We discuss the need for co-operation from other members in the family in order to change.

> *"When you talk about toxic substances, the average person agrees that something should be done about them, but they don't take it personally."*

"If we just look at toxics, we're taking too narrow a view and we aren't going to find solutions," Jennifer says. "We need to look at the big picture. These are lifestyle issues.

"When you talk about toxic substances, the average person agrees that something should be done about them, but they don't take it personally," Caroline says. "You can't expect the next person to do it; you've got to start with yourself. You have to think 'I do have a part to play. I am contributing.' It makes you take a closer look at your everyday life and make some reasonable choices," Caroline suggests.

"Corrective action is a new way of life. You have to start slowly and be realistic," Jennifer says. "At first it is quite overwhelming. Don't be too hard on yourself. Too much blame and guilt leads to depression."I am glad to hear this, as I am feeling quite depressed sitting here drinking my decaffinated (Swiss water process) coffee.

"Start with the things that aren't major sacrifices," Caroline suggests.

"We can't go back, but we can simplify our lives and be much more creative," Jennifer says. "Think of this as an opportunity."

Saturday, April 1: Making a Fresh Start

Richard and I take the kids for our weekly grocery shopping trip. I take a swing down the aisle of cleaning supplies. Borax is easy to find, as are Pears soap, Ivory Snow, and — sure enough — there's the washing soda. These products are considerably cheaper than their chemical-laden counterparts. I feel slightly ill looking at the rows of toxic products. We have a very long way to go in terms of educating people to look at alternatives. I pick up a few things for the Saturday chores.

Richard meanwhile is filling the cart with his half of the list. At the checkout, I notice he has picked up deodorant soap. I forgot to tell him he doesn't need deodorant over his entire body — pure soap will do. He has also bought more paper towels and juice in individual boxes for school lunches. I think about taking them back, but we're almost at the checkout and there are lineups everywhere. We'll talk later.

Back home, we get down to work. As Caroline suggested, I plan to use up my old cleaning products, but I decide to try some of the new-old products to see how they perform. We start with some biodegradable Murphy's Oil Soap in a pail of hot water (using less than the label suggests). It works fine on woodwork and then on both wood and linoleum floors. I try a little borax on a wet cloth to scrub away some stubborn marks on the lino floor. It works as well as Comet for this job and also in the bathroom to clean sink, tub and countertop. It is easier to rinse away, too. I have tried baking soda for countertops but find the borax more effective.

One thing, though: borax comes in a cardboard carton instead of a plastic shaker. This makes it more environmentally acceptable, but less handy to use. I think about punching some holes in the lid of a jar and keeping it under the counter.

We take a trip to the Oak and Brass Warehouse to inquire about refinishing the surface of our solid oak dining table. The salesman recommends number-four steel wool and, to fill in the scratches, a polish that is predominantly beeswax, so I decide it's okay. I don't buy the orange oil he also suggests, deciding to try olive oil instead.

As I make coffee, I make a mental note to call the Earth Care Store at the Environmental Resource Centre to find out if their shipment of reusable coffee filters has arrived.

Sunday, April 2: Doing It the Old Way

My seven-year-old stepson and I talk about environmental concerns. We decide to set the table tonight with cloth napkins. Not only does it look more elegant for a Sunday dinner, but they are reusable. I tell Gregory about visiting my cousin in Scotland where each member of the family had a personalized napkin ring and used the same cloth napkin until it needed washing. We could try that.

Thursday, April 6: And the New

The furniture cleaner arrives on schedule. I've struggled with this one all week, but still haven't been able to imagine myself using soap flakes, boiling water and borax to shampoo the two large loveseats and a brown chair that have endured the spills and spit-ups of my daughter's first two years.I bundled Janelle off to day care before the cleaner arrived so she would not be around to inhale the chemicals. This is the last time I will ever have them cleaned, I promise myself. Surely they will wear out one of these days.

"These couches have a lot of years in them yet," the man says as he finishes the job. I was afraid of that.

I interview him as he makes out the bill. He can't tell me what chemicals are in the cleaner, but does tell me the reason they use a chemical cleaning agent instead of shampoo is that it doesn't leave a residue in the fabric.

The Scotchguard is a combination of liquid silicone and teflon, he tells me. "They neutralize the toxicity of the silicone by cutting it with odorless mineral spirits," he adds.

I ask him if he has any concerns about working with chemicals all day. He says it doesn't bother him; he's never noticed any side effects.

"There were studies done by the university and they came back negative," he says. "At least, they said the long-term effects were no worse than smoking." We're both quiet for a moment. "I guess that's not too good for you, is it?" he adds. I leave the windows open most of the day.

Friday, April 7: Tomorrow's Another Day

"What did you do with the empty oil can?" I demand as Richard comes in from dumping the weekly litre of oil in his 1975 Plymouth Valiant. I have just finished washing out the Ziploc plastic bags Gregory has remembered to bring home in his lunch kit.

As I tuck my stepson into bed, he complains about the static in his sleepers. "The clothes at my mum's house don't make sparks," he says.

Shirley Serviss is an Edmonton freelance writer.

Non-toxic Reading

The Household Hazardous Waste Wheel is a handy reference for alternatives to chemical products. It also lists the hazardous ingredients contained in common household, auto products, paints and pesticides. The wheel provides information on whether to recycle, use up and discard the container, or store until a community collection day is organized. The Alberta Special Waste Management Corporation only has a limited number of the wheels available. They suggest writing to EHMI (Environmental Hazards Management Institute), P.O. Box 932, 10 Newmarket Road, Durham N. H. 03824.

Friends of the Earth puts out a publication (on recyled paper) called *Alternatives to Toxic Household Cleaning Products* which is available for $1.00 by writing to Friends of the Earth, Suite 701, 251 Laurier Ave. W., Ottawa, Ontario, K1P 5J6. Edmonton's Environmental Resource Centre has information on alternatives as well. They are planning to start a consumer hotline with home economist Jennifer Lowen on hand to answer questions. Call the Resource Centre at 433-8711, write or drop in. The centre is located at 10511 Saskatchewan Drive.

The public library system has a number of books on the subject of toxics in the home as well. Jennifer Lowen recommends the following: *What to Use Instead: A Handbook of Practical Substitutes* by Carol Ann Rinzler; and *Hazardous Wastes from Homes* by John Lord.

Noel McNaughton

SAFE FOOD
And How To Get It

Soil quality means we are what we eat

If you saw me in the supermarket, you would probably think I was an average consumer, and maybe I am. But inside, I am changing. I am a little more careful about what I buy. I read the ingredients on labels now, and I try to buy food with the fewest additives.

When it comes to pesticide residues on food, the chemical industry and government agencies say they don't hurt us. But the U.S. Natural Resources Defence Council says its recent two-year study predicts that more than 5,000 American children age five or younger will develop cancer because of pesticides in fruits and vegetables.

It's that kind of research that is making me a little more careful about what I eat these days.

> *Most Canadians believe organic vegetables are higher quality, better tasting, more nutritious and healthier than commercially grown ones.*

I am not alone either. Last year Agriculture Canada wanted to know what people thought about food, and whether interest in organic food was growing, so it commissioned a survey. Baseline Market Research Ltd., the company that did the survey, talked to the "primary grocery shopper" in more than a thousand households across Canada and found that interest in organic food was indeed growing.

One-third of the people surveyed had eaten organic vegetables at least occasionally during the past two years, 20 per cent had eaten organic fruits, and about 10 per cent had consumed organic meats and dairy products. It also found that most Canadians believe organic vegetables are higher quality, better tasting, more nutritious and healthier than commercially grown ones, and that almost three-quarters of Canadians are worried about pesticides in food.

Almost Half of Canadians Don't Trust Inspection Services

The statistic most surprising to me was that 43 per cent of the people did not trust the government to prevent harmful food from being sold. I guess I would be included in that group, but I didn't know there were so many of us! Not that I think government inspectors are incompetent, but that they really have no way of actually knowing whether the pesticides used on food are totally safe, or even, for that matter, what chemicals are on or in foods.

I know the federal government has health standards for the chemicals used in food production, but I also know testing chemicals on rats and other animals is no guarantee they will have the same effect on humans. Most of the testing is done in the United States anyway, and according to a 1984 report by the U.S. National Academy of Sciences, 64 per cent of the ingredients in pesticides have not been properly tested for toxicity. Then there are the hormones and antibiotics used to make plants and animals grow faster, and even waxes and shellacs to make fruits and vegetables look nicer. Altogether, it seems like a lot of chemicals on our food.

Seventy Per Cent of Canadians Are Interested in Organic Food

I haven't started shopping in health food stores, but if my local supermarket started carrying organic foods, I'd buy them. I'd even pay a little more for them. The Agriculture Canada survey I mentioned found that 70 per cent of Canadians who are not buying organic foods now are interested in them in the future, and would pay a premium (but not more than 25 per cent more) for them if they were easily available.

The food industry is slowly becoming aware of the growing interest in organic foods, and starting to realize that it isn't just leftover hippies who want more natural food. A lot of average citizens want it too, and they'll pay for it! Some supermarket chains have caught on already. By 1987 the Grand Union chain in the United States was selling "drug-free" beef in more than 300 of its stores on the east coast. Consumer response was so strong that this "natural" meat was already one third of Grand Union's total beef sales, and the chain was starting to experiment with selling drug-free chicken as well.

We Need Some Official Standards for "Organic"

The problem is, when you start talking about organic foods, things quickly get complicated. Just what is "organic"? What is the difference between "chemical-free," "chemical-reduced," "pesticide-free", "pesticide-reduced," "natural" and "organic"? Until recently, it was hard to say, because different growers or retailers seemed to have different definitions for the food they sold.

In November 1988 representatives from 20 organic growers' groups across the country met in Toronto and ironed out the definition of "organic" they wanted the federal department of Consumer and Corporate Affairs to use. This April, that department adopted the definition. It is a lengthy one, with the fine print taking up several pages, but in a (bureaucratic) nutshell organic food is:

"Food produced with a system of farm design and management practices that seek to create ecosystems which achieve sustainable productivity and provide weed and pest control through a diverse mix of mutually dependent life forms, recycling of plant and animal residues, crop selection and rotation, water management, tillage and cultivation."

Noel McNaughton

ENVIRONMENT ALBERTA

Now if you buy food that is labelled "organic," it must comply with this new definition. Even so, there are no strict legal standards growers must follow if they want to call their products "organic." Several organic growers' groups, including the Sustainable Agriculture Association of Alberta, are trying to get both federal and provincial governments to set some standards that growers must adhere to in order to be "certified organic." Most organic growers' groups themselves use variations of the standards set by the Organic Food Producers' Association of North America, and would like Canadian federal and provincial governments to pass legislation incorporating these standards.

The Sustainable Agriculture Association (SAA) has been pushing Alberta Agriculture for a couple of years to set some legal standards for organic certification, and hopes legislation will be coming in the near future. British Columbia is introducing its own organic certification law this spring.

Consumers Need To Know What They Are Buying

Sharon Rempel is past president of the Sustainable Agriculture Association in Alberta and the unofficial spokesperson for a loosely formed national network of organic groups. Now living in Keremeos, B.C. and also active with organic growers there, she says legislated certification standards are needed so consumers will know what they are getting.

"Self-certification, with every grower defining 'organic' his or her own way, is on its way out," says Rempel. "Consumers need to know that when food is labelled 'organic', they can count on consistent and reliable quality. In other words, it has to have consumer credibility." Rod MacRae, who works with the "ecological agriculture projects" at Macdonald College in Ste-Anne de Bellevue, Quebec, agrees. He is a member of a small committee working on a national logo and a set of national standards for organic food production that he hopes will be adopted by Agriculture Canada. Both Rempel and MacRae point out that besides the need for the dependable quality such standards would bring to organic food production, there are other agricultural needs to be addressed.

When Do "Natural" Products Go Against Natural Philosophy?

An increasing variety of "novel soil and crop amendments," that claim to be "natural" or "organic" are becoming available to growers. Guidelines are needed to evaluate these new products and determine whether they qualify for use in organic operations. Certain plant hormones, called plant growth regulators or PGRs, for example, are said to be "natural" in that they are derived from plant extracts. Applied to crops, these PGRs can speed growth, and increase yields. Although they may be produced from natural materials, some organic growers question whether these products comply with the philosophy of organic production.

As Neall Coulson, SAA president, points out, "The central focus of an organic management program is working with nature to enhance the life in the soil." Coulson says that according to the SAA's philosophy, plants should grow at their "natural" rate and not be forced to speed up their growth by hormones. Whether the hormones are derived from plants or from a biotechnology lab is not the issue.

"Organic groups not wanting these novel crop amendments to be used on organic crops will have a fight on their hands," says Coulson. "We'll need consumer support if consumers feel the same way we do."

The fight Coulson refers to will come from product manufacturers and growers who would like to use these "natural" PGRs and still be able to sell their crops as "organic." The need to settle the issue is becoming urgent because new production techniques made possible by advances in biotechnology will be making an increasing number of new PGRs, and other forms of natural yet man-made agriculture products available to farmers. A variety of laboratory-produced "natural" consumer products, such as vanilla extract, are hitting the market as well.

Organic or Not, Food Production Must Become Sustainable

In the 1950s Vernon Carter and Tom Dale, two American soil scientists, wrote "Topsoil and Civilization," a book describing the role topsoil plays in society. The authors maintained that all the great civilizations in history had disappeared not because of decadence, but because they didn't look after their land bases, and eventually lost their ability to produce enough food to sustain themselves.

Supporting their theory with convincing statistics, Carter and Dale described a regular pattern of decline because of overcultivation: eroded, logged-over forest lands and silt-clogged streams and rivers in every civilization from Syria to Rome. The book ends with a stern warning that North America was going the same route, only doing it faster because of more powerful equipment that can cut more trees and overcultivate more land.

In recent years other soil scientists have repeated the warnings about soil erosion and degradation because of improper cultivation and cropping techniques. Dr. Stuart Hill, who established the "ecological agriculture projects" at Macdonald College points out that pesticides add to the problem by upsetting natural plant and insect communities. In fact he says insecticides kill many more "good" insects than "bad" ones, which is one reason we are still losing the same percentage of our crops to insect damage as we did 40 years ago, in spite of having 300 new chemicals to attack them with!

My own farm background, plus university studies in agriculture and 15 years observing and reporting on agriculture as a farm journalist, have convinced me we must change to a more sustainable form of agriculture if our grandchildren are to have a food-producing land base. It isn't only up to farmers such as Neall Coulson and others interested in sustainable agriculture to make the change, either. Our very existence as human beings depends on food produced by someone else. It is strongly to our advantage to make sure the food producers have the best conditions to work under!

Farming Can Change, and We Can Help

Farmers can switch successfully from the current "petroleum-based" agriculture that depends mainly on synthetic fertilizers and pesticides, to a more sustainable "soil-based" agriculture that depends on crop rotations and other cultural practices aimed at co-operating with nature rather than at overpowering it. Ken Ashworth, who farms at Deadwood in the Peace River country, hasn't used any agricultural chemicals for 20 years. He grows wheat, barley, oats and flax and says he doesn't see much difference between his grain yields and his neighbors' yields. Ashworth has had to learn a lot about how plants grow and interact, and about using crop rotations, and he is still learning, but he doesn't mind the effort because he doesn't think chemicals are good for the land. "It feels like I am doing the right thing," he says. "And I like that."

The number of farmers wanting to switch to organic methods is growing. Last year the Sustainable Agriculture Association received applications for "organic grower" certification from 10 farmers. This year Neall Coulson expects to have more than 30 such applications.

Farmers such as Ashworth, and others who would like to get off the "agriculture treadmill" of ever-increasing farm chemical costs and diminishing sales returns, need support from consumers who like the idea of sustainable agriculture.

We can give that support in many ways. Perhaps the most important is to be willing to pay a little more for our food, and to buy organically grown products when we can find them. We can also ask our local supermarkets to begin carrying organic products, and then buy these products when they are in stock. We can shop at health food stores and farmers' markets that carry organic products, and tell producers what we want to buy, so they will know what to grow.

We can also lobby the provincial and federal governments to support research in areas of organic production, which receive essentially no research attention now. All these actions will increase the availability of organic food while supporting farming practices that build the soil up rather than degrade it.

The old adage "you are what you eat" is literally true when it refers to the nutrition available to plants. The richer the soil, the more nutritious the plants growing in it. That is one reason why the children of immigrants to North America are often much taller than their parents. It's also why the same species of animals will grow to different sizes in different regions. Rabbits in southern Missouri, for example, are bigger than their cousins in northern Missouri, because the soil is better, and their food is more nutritious.

Growing Our Own

Perhaps our ultimate goal as consumers might be to grow our own organic food. Brenda Giese and her husband Bruce Birney live on an acreage at Brant, southeast of Calgary. Brenda has been seriously trying to garden organically for the last six years. "I've always loved the land," says 35-year-old Brenda, "and I want my five children to have the healthiest food possible."

She grows all the family's vegetables except for fresh lettuce in the winter, and so far has had fairly good luck. "I had some bad luck with maggots in my turnips last year, so I'll have to learn more about them, I guess," says Giese. "When I have too much trouble with cabbage worms I use rotenone, which is an organic product, but I don't like to. I'd rather not use any poisons, organic or not."

Although there are many excellent organic gardening books in the book stores, Giese, like many gardeners, gets most of her knowledge by experience. In the future, when she has learned enough and her children are older, she would like to try organic market gardening. I can understand her desire. I plan to try some "sustainable farming" on a small scale myself.

For more information on the subjects discussed in this article contact:

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The National Network of Organic Groups is assembling a source book on organic growers, retailers, and other interested groups. This book is available from the Sustainable Agriculture Society's Edmonton office. Contact Nancy Finlayson at 437-6363, or Pat McIsaac at 432-1084.

Maryhelen Vicars

ENERGY MATTERS

Keeping the Heat In

And other approaches to conserving resources

GOVERNMENT OF ALBERTA

Jeff Bradshaw of the Energy Conservation Branch

My next house is going to be a new one, fresh out of the box, with triple-glazed windows, an intact vapor barrier, state-of-the-art ventilation and all the rest of the latest energy conservation features.

Alas, my means fall short of my dreams in this area (as in some others) and anyway, I like the neighborhood, I hate moving, and this rambling old house has a certain charm.

Along with the charm, of course, it has more than a few problems. We are using much more energy than we need to do, which carries environmental costs as well as an extra load on our utility bill.

As part of this issue on personal action, I invited Jeff Bradshaw of Alberta Energy's Energy Conservation Branch (pictured above) to do an energy audit on my 80-year-old two-and-a-half storey. Together, we walked through the house, with me scribbling furiously as Jeff pointed out one problem after another. Some of them

I knew about, like the terrible old windows we still have in some rooms, and others were obvious once he had pointed them out, like gaps where electrical conduit enters the house, and ill-fitting weatherstripping. We didn't talk too much about insulation. I already knew we needed to upgrade our attic and basement insulation.

But there were a few revelations. I didn't know, for example, that the upscale and pricey windows we had used in the renovated part of the house were not well rated for energy efficiency. Manufactured for U.S. conditions, they have removable inner panes which allow air to circulate between the two sheets of glass — in effect, they act as single-pane windows.

Keeping the Heat In

Before starting his walk-through, Jeff explained what we would be looking for. An energy audit considers three main factors:

- the envelope of the house, and the openings in the envelope;
- the systems (heating, cooling, ventilation) within the home; and
- the use of the home.

There are sophisticated measures for assessing how well the house works. A thermoscan is done with an infrared viewer; colder and warmer areas of the house show up as different colors, showing, for example, where heat loss is occurring in a poorly insulated section of a wall or along uncaulked baseboards, so these defects can be remedied. In an exfiltration test, special equipment is used to increase the air pressure within a house and to measure how quickly the air pressure drops, that is, how leaky the house is. Smoke pencils (like a smoking candle) can be held around windows and doors to detect very small drafts.

For most households, though, such high-tech audits are unnecessary. A knowledgable person can help a householder save considerable energy (and money) by pointing out problems and suggesting cost-effective remedies.

The Energy Conservation Branch does audits only on commercial and industrial buildings, but if you call 427-5200, they will give you names of reputable private auditors in your community.

Before you call in an expert, though, do a little reading. The branch has prepared a free series called Alberta Energy $avers, which give excellent step-by-step advice on heating system choice and maintenance, insulation, caulking and weather stripping, ventilation, wood heating and other topics. These are clearly written, with checklists and work plans to guide you. Look for these little red or white books in hardware store displays or call the branch. If you have questions, there is a toll-free number to call (Zenith 22339, in Edmonton 427-5300).Another excellent source of help is the publication Keeping the Heat In, from the federal department of energy. It, too, is clearly written and full of good how-to advice. Also from that department are a number of consumers' guidebooks, including one on assessing the energy efficiency of a resale house which includes a walk-through checklist. Other home renovation and construction publications are available from CMHC.

The Envelope

In new houses (depending of course on the level of the builder's commitment to energy efficiency), the envelope, or outer shell of the building is as much as possible a sealed unit, with continuous vapor barriers, good sealing around doors and windows and so on. In an old house like this one, though, the envelope is anything but continuous.

As we walked through the house and around the outside, Jeff pointed out a lot of chinks in our armor against the elements.

The general rule is to check any spot where the envelope is pierced. Windows and doors are the big openings, and we'll get to them later, but now we look at the small openings. That is, as Jeff points out, each one is small, but added together, he figures we have the equivalent of a small window open wide all year round. Hmmm, that sounds expensive, especially during a winter like the one we just experienced.

Some of these gaps are obvious. Our downspouts run into the house and down through a central drain. The rainwater comes in but so does a lot of cold air. Better to channel it outside, away from the foundation.

Gas, power, phone and cable lines all need caulking where they enter the house. An old milk chute should be fastened shut, sealed and insulated. The modern milkman leaves the two per cent on the porch, anyway.

Any light fixture or electrical outlet on an outside wall should be sealed. According to one of the department's little red books, up to 20 per cent of the total air-leakage heat losses occur through these outlets. You can use clear silicon to caulk around the perimeter of each outlet and around the switch or outlet, or you can use a commercial gasket (or make your own from a foam egg carton lid) between the plate and the wall. Keep a child-safety plug in all unused plugs on exterior walls.

Other areas needing attention are less obvious. For example, the dining room and main stairwell have cantilevered sections — parts of the room that extend out into space a couple of feet to make a little niche for a cabinet or to enlarge a landing. These are prime conduits for cold air. There is no foundation under them, and the underside is just plywood and full of cracks, allowing air to flow into the cavities between the floor joists. We insulated the one under the first floor landing, but it wasn't sealed well, and the cold air is almost as free to enter as if we hadn't filled the cavity with fibreglass. We

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Jeff Bradshaw would like to see these devices banned.

insulated it because we always felt a definite chill on the stairs even after installing a well sealed modern window to replace the old leaky one. No drafts, but the chill is still there. I guess that's why.

> **Solution:** Caulk cracks and seal the surface of the underside with stucco, painted plywood, or a covering like Tyvel which blocks air movement but is not a vapor barrier (you never want a vapor barrier on the outside of a wall or you will get moisture trapped inside the wall where it will freeze and cause damage and reduce the value of the insulation).

The perimeter of the house where the main floor meets the basement should be sealed to prevent outside air from leaking in and flowing between the floor joists. In an unfinished basement or in new construction, this can be accomplished with Styrofoam blocks fitted between the joists at the outside edge.

Some relief can be gained by removing baseboards and caulking where the floor meets the exterior walls. In a finished basement, a bead of clear silicon caulking can be used on exterior walls where the panelling or wallboard meets the ceiling.

About Caulking

Jeff recommends only two kinds for interior use: water soluble acrylic latex or, for bathrooms or other high moisture areas, acid-based silicon. The acid-based silicon cannot be painted. There is also a water-based silicon caulk which is paintable, but is not quite as good. For large gaps, Jeff recommends the use of polyurethane foam, but with caution: its volume expands two to three times after application. In my house, this is what Jeff recommends for the gap where the gas line enters the house.

Another area I hadn't thought much about is the attic, except to make sure it had enough insulation (it could use more, in fact). The attic should be well insulated from the rest of the house. We need to insulate the wooden hatches that lead into the attic space and to seal around the plumbing vents that go through the attic to the roof. There's a chapter in the Caulking and Weatherstripping volume in the Energy $avers series that gives details.

The same booklet will be our guide when we tackle the windows and doors. Some of the basement windows are aluminum sliders. Jeff says the weatherstripping on them should be replaced every two years. For the doors, Jeff shows me how to find gaps by seeing where the light leaks, and adjusting the weatherstripping gaskets for a seamless seal.

But Don't You Need a Few Leaks?

When I mentioned this project to a friend, he warned me not to do too good a job in tightening up the leaks, or the house would become stuffy and maybe unhealthy.

I asked Goldie Edworthy, head of Alberta Energy's Energy Conservation Branch. First, he assured me that it was unlikely that I could make this old house tight enough to create a problem. Anyway, the idea is not to stop needed fresh air, but rather to have some control over where and how it enters the house. Icy drafts from leaky windows are not the best source of fresh air.

The Heating System: Air Quality Matters, Too

We started looking at the heating system in the basement, where Jeff found a number of holes in the ducts for both hot air and cold air return. These were mostly small nicks or gaps where two pieces of duct were joined. The holes make leaks which cut down the operating efficiency of the furnaces as well as letting hot air escape before it reaches its destination. The result: a warm basement, but the rooms farthest from the furnace are uncomfortably cold.

> **Solution:** Use duct tape to patch holes in the cold air return ducts. If possible, insulate hot air pipes by wrapping with insulation and covering the insulation with plastic sheeting or framing it in.

The dust and moisture entering through gaps, added to the dust that filters down through the heat registers and cold air returns can create health problems. The dust that is carried along through the cold air return ducts into the furnace is caught in the furnace filter, but much of it settles along the way. Add some moisture and you have muck that is a breeding ground for bacteria and molds and a health hazard, especially for sensitive individuals.

Point-of-entry filters are available that fit just under the grille of the cold air return to trap dust before it gets a chance to circulate.

The idea is not to stop needed fresh air, but rather to have some control over where and how it enters the house.

In the laundry room, Jeff pointed to a damper gizmo on my dryer vent, which is used to direct warm moist air into the room instead of out into the yard during winter weather. "Lose that thing," he told me. He'd like to see these devices banned. The very minor energy savings are far outweighed by the health risks: the filter that covers the opening catches only the coarse lint; finer lint particles and the chemical residue of detergents and softeners pass unobstructed into the house.

More health threats in the furnace room. Like many older homes, ours once had a gravity furnace with huge exhaust pipes leading into a masonry chimney. The modern furnace's much smaller pipe goes into the large opening, with the gap around it stuffed with fibreglass batts. Not sealing around the opening means the chimney is probably not drawing properly. Under some circumstances water vapor in the exhaust

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may freeze, blocking the chimney and causing poisonous carbon monoxide to get into the house.

Our old gas-fired hot water heater (replaced last year) was badly corroded on top, caused, Jeff says, by the water vapor of the exhaust gases, which had backed up in the chimney and returned to the house through the vent on the hot water heater. Corrosion has not yet showed up on the new heater, but this is a dangerous situation, and one that goes to the top of my retrofit list, energy savings or not.

> **Solution:** The sealing material must be heat-proof. One solution is to put expanded metal lath in the gap and fill it with wood stove cement, building it up in layers like plaster.

I read later that there may be other causes for combustion air not to be drawn efficiently up the chimney, leading to potentially harmful backdrafting. Commonly this occurs when more indoor air is being used (vented out through a dryer, drawn up the fireplace chimney, etc.) than is being replaced by ventilation. If you suspect backdrafting, contact your local utility company for advice. They may be able to send a technician to assess the problem and suggest solutions.

Using Energy Wisely

While most of the changes we will have to make to this house will involve at least some expense, there are some that are absolutely free. These involve changes in habits: turning down the thermostat at bedtime (which we always do) and when the house is unoccupied (which we often forget).
A few more:

- You can get accustomed to a lower thermostat setting, especially if the house is not drafty.
- Keep the furnace well maintained, and cleaned and tuned each spring.
- Block heaters can be plugged into a timer device that switches them on very early in the morning, rather than having them run all night.
- Heating ducts running through unheated or cool basements should be insulated.
- Hot water heaters are the second-largest energy user in the house (after the furnace). Turning the thermostat down to 50 degrees will provide adequate heat for most uses and reduce the risk of scalding. (Using a kit or batt insulation, you can insulate the hot water heater to make it more efficient — the cost of the materials will be paid back in a year). Run washing machines with full loads and rinse with cold water. Turn off the hot water heater when you're away on holiday.
- Drapes and blinds can help keep the heat in if they are closed after the sun goes down. If you have air conditioning, drapes drawn during the day (especially on the south side) will help keep the house cool without running the system.

What To Do First

After the walkthrough and after reading the Energy $avers, I had a small list of things to do. Some were big-ticket items, like replacing windows, that we may be able to do in the fall. For us, fixing the potentially dangerous furnace venting seemed top priority. After that, caulking gaps (Jeff estimated the cost of materials at about $150) followed by insulating the hot water heater and upgrading attic insulation. Contact the Energy Matters hotline for advice on the relative payback periods of different energy-saving strategies.

ENERGY CONSERVATION BRANCH

The Second Price Tag

“Every appliance and lighting product you buy can be thought of as having two price tags. We are all familiar with the first — the purchase price. The second price tag is less familiar but just as real: it is the cost of the energy you need to use your new appliance.”

This is the beginning of a very useful booklet available from Energy, Mines and Resources Canada, the *Consumer's Guide to Buying Energy-Efficient Appliances and Lighting*.

The same department operates the Energuide program, which involves placing stickers on every new major appliance sold in Canada, detailing the number of kilowatt hours of energy it uses in a month. The ratings are determined by the manufacturers from testing under Canadian Standards Association-specified conditions.

This helps with comparison shopping. If, for example, one fridge costs $75 more than a second, but uses $5 worth less energy each month, the extra investment is repaid in 15 months, and after that, the savings pile up. In many cases, however, energy efficiency is not entirely tied to price. A less expensive model may be more energy efficient than its competitors.

Among frost-free refrigerators, the most efficient is listed at 73 kilowatt hours per month; the least at 145 kilowatt hours per month. This translates into an extra $808 spent on energy over the lifetime of the applicance.

There are six directories, updated annually, listing models and ratings for fridges, freezers, dishwashers, ranges, washers and dryers. For a copy of one of these directories call toll-free at 1-800-222-6477, or in Edmonton call the regional office at 495-4035.

The editor of Environment Views, *Maryhelen Vicars is a freelance writer and editor based in Edmonton.*

VIEWPOINT *by David G. Dodge*

"What use is a house, if you haven't got a tolerable planet to put it on?"

– Henry David Thoreau

There was a dad, let's call him Doug. He had a concern for the environment that was admirable, although a little unusual in one of his sex, according to the surveys.

He dutifully washed and saved cans, rinsed and saved his glass containers and pop bottles and actually separated clay-based paper from newsprint, and stacked everything neatly for delivery to various recycling depots. He took used oil from his car to the oil recycling depot in the far end of town.

He used cloth diapers instead of disposables. Instead of chemicals, he used Ivory soap to discourage certain insects. Doug saved his organic scraps for compost. He saved his paint cans, batteries, solvents and anything else that he thought might be toxic, for delivery to the toxics round-up held every year. He bought in bulk, and avoided buying packaging whenever possible. He rode his bike whenever he could, to avoid using the car. When he had to drive, the car was always fuelled with unleaded gas.

He encouraged his friends to do the same sort of thing. (Although some of them thought he was an eco-zealot or at least a little eccentric, his concerns are widely shared. Environmental questions are on the minds of Canadians and they arise every day in the home).

But one day, after years of being so good, Doug began to get frustrated. He asked himself, "What's the point? Why do I have to invest so much time, energy, and commitment to clean up my 500 square metres of the earth, when the looming environmental crisis continues to grow and expand every year?"

To Doug it seemed like he was spitting into the wind. He was tempted, out of spite, to start using disposable diapers again, to spray every tree and blade of grass in his yard with every chemical known to man.

But he didn't give up. Doug became a member of several environmental groups and he began to follow environmental issues in the news.

"Perhaps I have misunderstood this personal responsibility stuff," thought Doug. "Maybe there is more to it than rinsing out cans."

For Doug, the next step came when he read that the municipal government of the twin cities of Minneapolis-St. Paul had created a bylaw that bans plastic packaging of foods within the boundaries of the two American cities, to combat a mountainous garbage problem. Doug took note and realizing that his own city still didn't recycle, he began to write letters to civic politicians, volunteered with a local pollution group and helped collect toxic wastes.

He then discovered, while he had gone to great pains to clean up his own house, the environment department didn't even use recycled paper. He wrote a letter to the minister and explained that he has worked hard to help the environment, but that he felt his government should take more of a leadership role. He then wrote the minister of economic development and suggested that he support the establishment of a paper mill that produces recycled paper in Alberta.

He then discovered the government published a magazine about the environment and wrote a letter to them asking why they didn't print on recycled paper.

At one time, Doug's father had a farm and Doug was aware of how ecologically devastated the prairie region has become. He knows that nearly one-third of all endangered species in Canada live on the prairie. He was particularly disturbed with the rising use of chemicals on the farm. Doug wondered why so much research money is invested in chemicals and so little in sustainable agriculture. He read recently in Canadian Geographic that carbofuran, used to spray grasshoppers, kills 2.4 million songbirds across North America each year. He sent a donation to the Sustainable Agriculture Association.

David Dodge

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Doug began to wonder if there was any other way he could help protect the environment. He remembered the Minneapolis bylaw and was aware of an upcoming municipal election. Spare time was by now at a premium, but he pitched in to work with one of the candidates, helping him to develop an environment platform.

After a short time, Doug began to realize that one of the most significant problems was education. He was amazed to discover an attitude among some political circles that seemed to isolate environmentalists; labelling them as idealists living in a romanticized world devoid of reality.

Now, Doug had nothing against the lawyers and business people who govern in this country, but he reasoned that our future is only partly tied to business and law. He wondered why biologists, scientists and philosophers weren't elected to offer their expertise.

Like Doug, I agree that the environment is a personal responsibility, but that personal responsibility extends beyond our personal lives into our working worlds and on into corporate board rooms, and especially into the legislatures of Canada.

People frequently feel helpless when it comes to environmental issues. As they begin to learn about environmental problems it is easy to become overwhelmed. For this reason, personal action is important, but Doug was right; it is more than just rinsing out cans.

As well as managing our homes, farms and businesses with environmental sensitivity, personal action can include a couple of other steps.

Join a conservation group. It's effective, easy and you get tremendous conservation value for your dollar.

Take the plunge and write to corporations, government, newspaper or a friend if only to ask what they are doing to solve environmental problems.

David Dodge is editor of Borealis Magazine, *a non-profit conservation magazine published by the Canadian Parks and Wilderness Society.*

BOOK REVIEW *by David Spalding*

Blueprint for a Green Planet.
Your practical guide to restoring the world's environment.

John Seymour and Herbert Girardet. Prentice-Hall, New York. 1987.
192 p. Soft cover, $26.95.

This is an important book because of its subject matter. It not only brings together a valuable overview of the environmental crisis in which we are all living, from a perspective of the late eighties, but it recommends practical courses of action that can be followed by every concerned individual. Despite some weaknesses, on the whole the book lives up to its role.

It arises out of a British TV series but is far more than the "book of the film", and is quite self contained. Although its background is British, abundant use is made of examples from North America (including some from Canada), and from the rest of the world. Incidentally, Canada does not show up well in the statistics - per capita, we have the second highest car and water usage, and the third highest garbage production.

Each chapter summarizes a major aspect of the crisis of human ecology. This is not a lament for lost species or endangered habitats in remote corners of the world - it is concerned mainly with First World humankind and our habitat; the cities and countryside in which most of us live. Calmly, and relatively unemotionally, it talks about water, farming, food, garbage, health and energy. Other chapters are devoted to the "cleanliness obsession" in the home, gardening without pesticides, building without chemical poisons, and minimizing pollution from cars. The main points in the text are summarized by ugly but effective diagrams, and possible solutions presented in boxes.

I would have been more comfortable if the photographs and statistics were beter documented - there are no sources (or even dates) for most of the statistics.

No matter how environmentally well read the reader is, there are likely to be shocks in this new summary. I was disturbed to learn that there are European rivers where contraceptive hormones have reached detectable levels; to know the extent of painful animal tests on cosmetic products; to learn that that desertification in North Africa may be increasing because of deforestation further south; to see the fullest account of the links between North American fast foods and South American deforestation, and to learn the amount of tree damage caused by acid rain in Europe.

Some concerns are inevitably neglected. Canadians and others in northern climates would have more difficulty than other countries in sticking with locally grown vegetables; the world's oil supply is still being augmented by new discoveries (though these are getting more expensive and environmentally hazardous to exploit); and there is no discussion of the effects of new technology in changing life styles so that going to work may no longer necessitate a polluting rush hour drive.

Solutions offered vary from the simple and obvious to radical changes in lifestyle of large populations. An encouraging point is that many of the solutions offered are already working somewhere, though not necessarily on a commercial scale. Thus we are assured that organic farming can pay almost as well as chemically sustained monocultures; that Sweden has already successfully banned nitrite fertilizers; that factory farming of livestock is not justified by cost; and that agroforestry is already working for Africa. Not all solutions are as clean as the authors suggest: the patio ultraviolet insect zapper is certainly less poisonous than pesticides, but still destroys harmless and beneficial insects with the same zeal as pests. Not all the traditional medicine recommended is widely accepted, and to build no new roads anywhere is a drastic solution to the problem of the car.

Lists of organizations and publications offer more productive starting points for the newly involved reader, although some Canadian listings would have been useful.

In covering such a broad field, there are inevitably some biases, and the authors occasionally give way to woolly thinking. We are exhorted to follow "nature's own methods" as if they are automatically better. (Nature's own methods of population control as experienced in the Sudan right now come to mind).

Inconsistencies between recommendations are not explored - we are asked to save water on the one hand, yet to wash cars regularly so that the bodywork does not need replacing. There is often a lack of a Third World perspective; we are urged to use local wood instead of tropical timber, yet the impact of this on tropical economies is not discussed.

More generally, a charming but misleading contrast is developed between our wicked twentieth century ways and the golden past when everyone ate brown bread and didn't spray the garden with anything stronger than soap. The past was not such an environmental golden age - this reviewer remembers seeing a large collection of medieval skulls whose teeth were all ground flat by the coarse grit left by grindstones in the bread. And are we really to believe that there was no soil erosion in medieval open fields?

Despite some weakness in the presentation however, the overall agrument of the book hangs together. We do have a good idea of the problems by now, and many of the solutions offered here - whether small or large scale - are the best solutions we have available right now.

It would take a different book to analyze in detail the reasons why these generally sensible measures are not more widely adopted in the face of overwhelming evidence that many of them are necessary. Here we have only a rather simplistic assumption that big business is bad, that government is powerless to help, and that the media don't rock the boat to keep their advertisers happy. This has certainly been true in well documented cases, but some areas of society are responding much more effectively than this would suggest.

The great strength of the book is to show how the radical environmentalism of the last few decades looks increasingly like common sense. It is no longer a matter of waiting for government or big business to take the necessary action. The knowledgeable and concerned individual, when shopping, choosing food and household, garden and health products, has the power of the purse that will make polluting manufacturers of inappropriate products start to change their products.

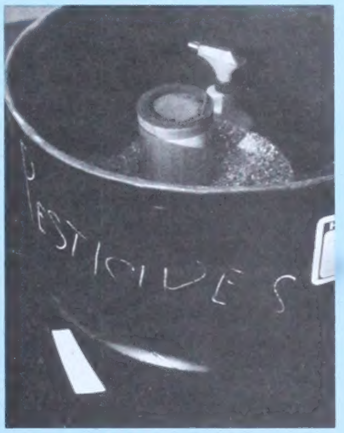
The content of this book is one of the major concerns of the 21st century. It has taken us most of this century to define and understand the dimensions of the environmental problem. It will clearly take us well into the next at least to solve it. Until then, we all stand guilty of the "crime against the future" so lucidly documented here, that of making an incredible mess of the earth and leaving it for our children to clean up - if they can!

David Spalding, an Edmonton freelance writer and heritage consultant, is Vice-President of Kanata Heritage Research & Presentation Corporation.

AROUND THE PROVINCE

Round 'Em Up and Move 'Em Out!

You can do your own household inspection for potentially hazardous products. Check your basement for paint thinners, strippers and solvents, lacquers, stains, varnishes, wood preservatives, oil-based paints, glues and photographic chemicals. See if your cupboards contain drain and window cleaners, disinfectants, oven cleaners, septic tank cleaners, bleach and ammonia, cleaning solvents and spot removers. Have a look in your shed for ant and rodent killers, weed killers, pesticides and pool chemicals. Take a look in the garage for antifreeze, solvents, battery acid, gasoline, used motor oil, brake and transmission fluid.



ALBERTA SPECIAL WASTE MANAGEMENT CORPORATION

Make sure they are stored safely. If there are any you no longer need, don't throw them in the garbage.

Toxics round-ups will be held in over 60 Alberta communities between the end of April and mid-October this year. Contact your local municipality office for information on where and when one will be held in your community.

At a toxics round-up, materials believed to be hazardous are sorted and classified, wrapped with absorbent materials and packed into 200-litre drums. These drums are sealed and transported to Swan Hills for treatment and disposal.If your municipality is not planning to hold a round-up, encourage your elected officials to reconsider.

Tom Thackery, manager of program development for the Alberta Special Waste Management Corporation, is in charge of organizing toxics round-ups throughout the province. He can be contacted by mail at 900, 10909 Jasper Avenue, Edmonton, T5J 3L9, or by calling 422-5029.

Are you a new reader?

Environment Views will be distributed free at all Environment Week activities throughout the province. If you picked this copy up at one of the locations, or are reading a friend's, welcome. Environment Views covers topics of environmental concern to Albertans, providing facts and a forum for a range of views. If you're interested in Alberta's environment, send in the card and become a subscriber. It's free. If the card is missing, phone or write to us at the address inside the front cover.

Continued from page 4

companies in that we're going to the public prior to doing the assessment; then we'll do an assessment, then we'll go back with a draft and say 'These are the questions you have asked, these are the answers we've come up with, what further information do you need?'," commented Jerrard.

The objectives of the environmental impact assessment are to "inform the public, invite public participation and provide the opportunity for the public to become involved early and often throughout the process," according to Jerrard.

Concerns raised so far about the proposed expansion have focused on the colored effluent discharged into the Wapiti River, odor from the pulp mill during inversions and the release of dioxins.

–Shirley Serviss

Around the Province *was prepared by Cathie Bartlett and Shirley Serviss, both Edmonton freelance writers.*

If undelivered, return to:

Environment Views
Alberta Environment
9820 - 106 Street
Edmonton, Alberta T5K 2J6

ENVIRONMENT UPDATE

Our Environment... Handle With Care

Environment Week '89 has generated more involvement at the local level than ever before. Fifteen regional coordinating committees from Fort McMurray to Medicine Hat have been busy developing projects to improve the environment.

environment week '89

June 4 – 11

There will be litter clean-ups, toxic round-ups, bottle drives, tree planting projects, puppet theatre productions, bike commuting tours, workshops on organic gardening and even an environmental music revue. In Calgary, 3,500 volunteers from 75 community organizations plan to clean up sections of the riverbanks and pathways, reports Peggie Graham, communications coordinator of the Environment Week Association of Alberta.

A "picnic in the park" will kick off environment week in Edmonton, starting with an inter-denominational church service.

"Church groups, generally, are getting more interested in environmental issues and that's a whole new constituency for us," Graham says.

Environment Week '89 has also attracted more involvement from industry. Three power-generating utilities — Alberta Power, Edmonton Power and TransAlta have co-operated in sponsoring a poster to advertise Environment Week.

"We've been very encouraged by the support we're getting from industry," Graham says.

Our Environment...Handle With Care is the Alberta theme for Environment Week '89 — June 4 to 11.

Environment Week's objectives are to increase public awareness of the nature and scope of environmental problems and their potential solutions. The public is encouraged to participate throughout the year in activities and practices that will improve the environment.

Environment Week has been a national celebration in Canada since 1972. The Environment Week Association of Alberta was formed in 1985 to coordinate the efforts of government, business, environmental interest groups, industry and individuals to promote Environment Week each year.

If you have a short news item of province-wide interest you'd like to contribute to Environment Update, please send it to the editor at the address on the Contents page. The editor reserves the right to select and edit the items.

Celebrating Wilderness

There may just be time to get tickets for the Alberta Wilderness Association's Environment Week celebration. A banquet and auction is being held Friday, June 2 at the Glenmore Inn in Calgary to help the group raise funds for its education and conservation work. Honorary chairman of the event is author and environmentalist Andy Russell, who will be joined by another well known Albertan, author and former lieutenant-governor, Grant MacEwan. Items donated for the auction include artwork, backpacking equipment and wild country adventure tours.

The tickets ($50 each) are available from the AWA office, Box 6398, Station D, Calgary T2P 2E1, 283-2025

Whiter than White?

The group Friends of the Peace, formed soon after the announcement of construction of a kraft pulp mill near Peace River, has been meeting to review the environmental impact of the mill.

One of the group's concerns is about the impact on the river of chlorine used to bleach pulp to create bright white paper. Friends of the Peace has undertaken a survey of paper consumers to guage the extent to which people would be willing to buy unbleached milk cartons, tissues and the like. The survey was first conducted locally, and found "overwhelming interest" in using such products, the group says.

The group is now looking for help in distributing the survey across Canada to help support the group and the mill to determine how large a market there would be for alternatives to bleached paper products. For further information, or to help distribute the survey, contact the Friends of the Peace, Box 7118,
Peace River, Alberta
T8S 1S8
624-5966 or 624-8898.

River Concert

Friends of the Oldman River are hosting a free concert to help educate the public about the value of the Oldman River. Scheduled for 2 p.m. Sunday, June 11 at the Maycroft Campground one hour south of Longview on Highway 22, the event will feature singer/songwriters Ian Tyson, Gordon Lightfoot and Murray McLaughlan, scientist David Suzuki, and Andy Russell, author of *The Life of A River*. No camping at Maycroft, but other public campgrounds nearby.